

# LOUISVILLE & JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT DISPARITY STUDY

**FINAL  
REPORT**

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# CHAPTER 1: Legal Review

## I. Introduction

This chapter presents the constitutional standard utilized by federal courts to review local governments' minority business enterprise contracting programs. The standard is set forth in the 1989 United States Supreme Court decision of *City of Richmond v. J.A. Croson Co.*<sup>1</sup> (“*Croson*”) and its progeny. *Croson* examined the City of Richmond’s locally-funded Minority Business Enterprise (MBE) Program’s subcontracting requirement and decided that all programs employing racial classifications would be subject to “strict scrutiny,” the highest legal standard. Strict scrutiny requires a “compelling interest” in remedying discrimination, which the Court defined as a “strong basis in evidence” of the persistence of discrimination. Anecdotal evidence providing broad notions of equity or general allegations of historical and societal discrimination against minorities fail to meet the requirements of strict scrutiny. To employ race-conscious measures, there must be a finding of statistically significant underutilization of available businesses to establish the presence of discrimination in public contracting. And any remedy that is race-based must be narrowly tailored to the findings and impose a minimal burden upon unprotected classes. Thus, the application of the findings should be limited to the ethnic groups that were found to have a statistically significant disparity.

### A. Chapter Overview

The legal standard *Croson* and its progeny set for implementation of a race-based contracting program is presented in seven sections. The first section is the Introduction, followed by *Section II: Standard of Review* provides an overview of the constitutional parameters applicable to race- and gender-conscious programs. A factual predicate, as set forth in *Section III: Burden of Proof*, is documented evidence of past discrimination which must be demonstrated by MSD before the implementation of race and gender remedial measures. The *Croson Evidentiary Framework* is discussed in *Section IV*. The framework must include a strong basis in evidence of past discrimination and “narrowly tailored” race-conscious remedies.<sup>2</sup> A *Consideration of Race-Neutral Options*, offering remedial initiatives in addition to race- and gender-conscious remedies, is described in *Section V*. The *Conclusion* is *Section VI* and *List of Authorities* is contained in *Section VII*.



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<sup>1</sup> *Richmond v. J.A. Croson Co.*, 488 U.S. 469, 495-96 (1989).

<sup>2</sup> *Croson*, 488 U.S. at 486.

Given the history of the *Croson* decision, due diligence must be taken to ensure that the methodology employed in disparity studies meet the legal standards set by case law. The relevant circuit court decisions that address the application of race in public contracting following *Croson* are summarized in the tables below. For MSD, the Sixth Circuit’s decisions are controlling. The holdings in these cases are discussed in detail within this chapter.

**Table 1.1: Sixth Circuit Holdings**

Sixth Circuit	
Ohio, Michigan, Kentucky, and Tennessee	
Case Name	Holding
<i>Associated Gen. Contrs. Of Am. V. City of Columbus</i> , 936 F. Supp. 1363 (S.D. Ohio 1996).	In <i>Associated General Contractors of America</i> , the court held that the City’s Code of Ordinances was not narrowly tailored to accomplish its remedial purpose. The statistical evidence did not support a finding of discrimination; and the anecdotal evidence, consisting of interviews and public hearing testimony, was not persuasive proof of discrimination in the private sector.  The court enjoined the City from enacting race or gender-based remedies based on the City’s Code of Ordinances.
<i>Associated Gen. Contrs. Of Ohio, Inc. v. Drabik</i> , 214 F.3d 730 (6 <sup>th</sup> Cir. 2000)	In <i>Associated General Contractors of Ohio</i> , the court held that for statistical evidence to meet the legal standard of <i>Croson</i> , the court must consider the capacity of the businesses defined as ready, willing, and able to contract with the State.  The court enjoined the State from awarding contracts under the program.
<i>Michigan Rd. Builders Ass’n v. Blanchard</i> , 761 F. Supp. 1303 (W.D. Mich.1991).	In <i>Michigan Rd. Builders’ Ass’n</i> , the court held that the State’s DBE program was based on federal regulations and therefore did not violate the ban on M/WBE contract goals stipulated in Section 2 of the Michigan Constitution.  The court upheld the State’s DBE program as constitutional.
<i>West Tenn. Chapter of Associated Builders &amp; Contrs., Inc. v. Board of Educ.</i> , 64 F. Supp. 2d 714 (W.D. Tenn. 1999).	In <i>West Tenn Chapter of Associated Builders &amp; Contractors Inc.</i> , the court held that post-enactment evidence could not be used as a predicate for prior discrimination.  The court enjoined the City from adopting an M/WBE program based on post enactment evidence.



<b>Sixth Circuit</b>	
<b>Ohio, Michigan, Kentucky, and Tennessee</b>	
<i>Brunet v. City of Columbus</i> , 1 F.3d 390 (6th Cir. 1993), cert. denied, 510 U.S. 1164, 114 S. Ct. 1190, 127 L. Ed.2d 540 (1994)	<p><i>In Brunet</i> the court held that differing standards of review for “gender conscious” and “gender preference” remedies can be applied to gender-based remedial measures.</p> <p>The court required the City to apply intermediate scrutiny to gender conscious programs and the higher strict scrutiny standard to gender preference remedies.</p>

**Table 1.2: Third Circuit Holdings**

<b>Third Circuit</b>	
<b>New Jersey, Delaware, Pennsylvania</b>	
Case Name	Holding
<i>Contractors Ass’n of E. Pa. v. City of Phila.</i> , 6 F.3d 990 (3 <sup>rd</sup> Cir. 1993)	<p>In the <i>Contractors Association of Eastern Pennsylvania</i>, the court held that the successful attainment of a government business enterprise certification to be a valid method of defining availability.</p> <p>The court affirmed that the attainment of a government business enterprise certification is an appropriate method for determining the capacity for qualified available businesses in the relevant market area.</p>

**Table 1.3: Fourth Circuit Precedent**

<b>Fourth Circuit</b>	
<b>Maryland, District of Columbia, Federal Circuit, West Virginia, Virginia, North Carolina, South Carolina</b>	
Case Name	Holding
<i>H.B. Rowe Co. v. Tippett</i> , 615 F.3d 255 (4th Cir. 2010).	<p><i>In H.B. Rowe</i>, the court held that the State’s statute was narrowly tailored to achieve North Carolina’s compelling interest in remedying discrimination in public sector subcontracting against African American and Native American subcontractors.</p> <p>The court enjoined the State from including Asian American and Hispanic American subcontractors in the program because they were not underutilized at a statistically significant level. Caucasian females were also excluded from the program because they were overutilized on the State’s contracts.</p>



**Table 1.4: Fifth Circuit Holdings**

<b>Fifth Circuit</b>	
<b>Texas, Louisiana, Mississippi</b>	
Case Name	Holding
<i>W. H. Scott Constr. Co. v. City of Jackson</i> , 199 F.3d 206 (5 <sup>th</sup> Cir. 1999).	<p>In <i>W.H. Scott Construction</i>, the court held that the City’s construction affirmative action program was unconstitutional because the factual predicate did not include an analysis of the availability and utilization of qualified minority contractors in the relevant statistical pool.</p> <p>The court enjoined the City from adopting a public contracting affirmative action program.</p>
<i>Kossmann Contr. Co. v. City of Houston</i> , 128 Fed. Appx. 376 (5 <sup>th</sup> Cir. 2005)	<p>In <i>Kossmann Constr. Co. v. City of Houston</i>, the court held that the City’s use of race and gender quotas in public contracting to be a constitutional use of government power.</p> <p>The court denied the plaintiff’s appeal.</p>

**Table 1.5: Seventh Circuit Holdings**

<b>Seventh Circuit</b>	
<b>Wisconsin, Illinois, Indiana</b>	
Case Name	Holding
<i>Milwaukee County Pavers Ass’n v. Fiedler</i> , 922 F.2d 419 (7 <sup>th</sup> Cir. 1991).	<p>In <i>Milwaukee County Pavers Association</i>, the court held that the State’s DBE program was constitutional because the federal highway grants were conditioned upon compliance with federal DBE regulations and its goals.</p> <p>The court upheld the County’s DBE program.</p>
<i>Northern Contracting v. Illinois Department of Transportation</i> , 473 F.3d 715 (7 <sup>th</sup> Cir. 2007).	<p>In <i>Northern Contracting</i>, the court held that the Illinois Department of Transportation’s DBE program was narrowly tailored to meet the strict scrutiny standard.</p> <p>The court upheld the State’s DBE program as constitutional.</p>
<i>Midwest Fence Corp. v. United States DOT</i> , 840 F.3d 932 (7 <sup>th</sup> Cir. 2016)	<p>In <i>Midwest Fence Corp.</i>, the court held that Illinois Department of Transportation DBE program was narrowly tailored to serve the compelling state interest in remedying discrimination in public contracting.</p> <p>The court upheld the DBE Program as constitutional.</p>



**Table 1.6: Eighth Circuit Holdings**

<b>DBE</b>	
<b>North Dakota, South Dakota, Nebraska, Minnesota, Iowa, Missouri, Arkansas</b>	
Case Name	Holding
<i>Sherbrooke Turf, Inc. v. Minn. DOT</i> , 2001 U.S. Dist. LEXIS 19565 (D. Minn. 2001)	In <i>Sherbrooke Turf Inc.</i> , the court held that the State’s modified DBE program was constitutional because it satisfied the compelling government interest prong by demonstrating a factual predicate of clear and persistent racism and discrimination in highway subcontracting.  The Court upheld the DBE program as constitutional.

**Table 1.7: Ninth Circuit Holdings**

<b>Ninth Circuit</b>	
<b>California, Washington, Oregon, Montana, Idaho, Nevada, Arizona</b>	
Case Name	Holding
<i>Coral Constr. Co. v. King County</i> , 941 F.2d 910 (9th Cir.1991)	In <i>Coral Construction Company</i> , the court held that although the County’s program was instituted after or in conjunction with race-neutral means and it utilized goal-setting on a case-by-case basis rather than rigid numerical quotas, it was unconstitutional because it permitted MBE participation by companies that had no prior contact with the County.  The court enjoined the County from implementing the MBE portion of the program and the WBE component survived a facial challenge.
<i>W. States Paving Co. v. Wash. State DOT</i> , 407 F.3d 983 (9th Cir. 2005).	In <i>Western States Paving</i> , the court held that the State’s DBE program was unconstitutional as applied because the State included ethnic groups in its DBE goals that did not have a statistically significant disparity.  The court enjoined the State from including the groups that did not have a statistically significant disparity in the DBE goals.

**Table 1.8: Tenth Circuit Holdings**

<b>Tenth Circuit</b>	
<b>Wyoming, Utah, Colorado, Kansas, Oklahoma, New Mexico</b>	
Case Name	Holding
<i>Concrete Works of Colo. v. City and County of Denver</i> , 321 F.3d 950 (10 <sup>th</sup> Cir. 2003).	In <i>Concrete Works of Colorado</i> , the court held that the City’s affirmative action ordinance, that established participation goals for racial minorities and women on construction and professional design contracts was narrowly tailored and constitutional.  The court reversed the previous holding which enjoined Denver from enforcing the 1998 Ordinance and declared the 1998 Ordinance and 1990 Ordinances constitutional.



**Table 1.9: Eleventh Circuit Holdings**

<b>Eleventh Circuit</b>	
<b>Florida, Georgia, Alabama</b>	
Case Name	Holding
<i>Cone Corp. v. Hillsborough County</i> , 908 F.2d. 908 (11 <sup>th</sup> Cir. 1990).	In <i>Cone Corporation</i> , the court held that the County’s MBE program was constitutional because it was based on statistics showing prior discrimination in the construction industry by the County, and the County had unsuccessfully tried less restrictive measures for remedying such discrimination.  The court upheld the County’s MBE program as constitutional.
<i>Engineering Contrs. Ass’n v. Metropolitan Dade County</i> , 122 F.3d 895 (11 <sup>th</sup> Cir. 1997).	In <i>Engineering Contractors Association</i> , the court held that business affirmative action programs, providing the use of race-, ethnicity-, and gender-conscious measures in awarding County construction projects were unconstitutional because the studies had limited probative value and failed to account for other non-discriminatory factors. The anecdotal evidence did indicate discrimination, but it was not sufficient in the absence of probative statistical evidence.  The court enjoined the County from implementing a public contracting affirmative action program.

## **II. Standard of Review**

The standard of review refers to the level of scrutiny a court applies during its analysis of whether or not a particular law is constitutional. This chapter discusses the relevant standard of review applied to remedial programs based on race or gender, including the heightened standard of review that the United States Supreme Court set forth in *Croson* for race-conscious programs and that the Sixth Circuit applied to gender-conscious programs.

### **1. Minority Business Enterprise Programs**

MBE programs are designed to ensure that minority-owned businesses are afforded equal access to public contracting opportunities. MBE programs can contain both race-conscious and race-neutral policies and procedures to achieve the objectives of the program. In *Croson*, the United States Supreme Court affirmed that, pursuant to the Fourteenth Amendment, the proper standard of review for state and local race-based MBE programs is strict scrutiny.<sup>3</sup> Under a strict scrutiny analysis, the government must show that the race-conscious measures in a challenged program are narrowly tailored to achieve a compelling state interest.<sup>4</sup> In practice, strict scrutiny requires that a government entity prove both a “compelling interest” in remedying identified discrimination based upon “strong evidence,” and that the measures adopted to remedy the discrimination are “narrowly tailored” to that evidence. The Court recognized that a state or local entity may take action, in the

<sup>3</sup> *Croson*, 488 U.S. at 493-95.

<sup>4</sup> *Id.*



form of an MBE program, to rectify the effects of *identified, systemic racial discrimination* within its jurisdiction.<sup>5</sup>

In *Croson*, the plaintiff was a construction firm and sole bidder that was denied a contract because it failed to meet the 30 percent MBE goal under the City of Richmond's MBE Plan. The plaintiff argued that the MBE Plan was unconstitutional under the Fourteenth Amendment's Equal Protection Clause. The City's MBE plan imposed a 30 percent MBE subcontracting goal on prime contractors that were awarded City construction contracts but imposed no geographic limitation on the available pool of MBEs, and did not provide for the possibility of a waiver in the application of the MBE goals. The Court affirmed that the City of Richmond's MBE Plan violated both prongs of strict scrutiny, in that there was not a compelling governmental interest and the 30 percent set-aside was not narrowly tailored.

The City failed to demonstrate a compelling governmental interest because the evidence did not establish prior discrimination by the City in awarding contracts. The City presented generalized data of past discrimination within the construction industry as a whole and included nonracial factors that would affect any group seeking to establish a new business enterprise, such as deficiencies in working capital and inability to meet bonding requirements. The court held that evidence of general application is not sufficiently particularized, was not germane to the City's local contracting market, and is insufficient to implement race-based relief under the Fourteenth Amendment's Equal Protection Clause. Additionally, the Court rejected the statistical methodology used to determine disparity. The City of Richmond relied on a statistical disparity analysis to identify the discrimination that the MBE Plan was seeking to remedy. The City's disparity analysis was calculated based on the number of prime contracts awarded to MBEs as compared to the City's MBE population. According to the court, the proper calculation should have been based on a comparison of the percentage of MBEs in the relevant market area that are qualified, willing, and able to work on the City's contracts to the percentage of total City construction dollars that were awarded to MBEs.

The City failed to demonstrate that the MBE Plan was narrowly tailored to remedy the effects of prior discrimination because it entitled MBEs located anywhere in the country to an absolute preference based solely on their race and failed to establish discrimination within the City's local contracting market. Furthermore, the 30 percent goal was not based on the availability of MBEs in the City's local contracting market. The Court determined that the 30 percent goal was predicated on an unrealistic assumption that MBEs will choose to work on the City's contracts. Additionally, the Court determined that the City did not seriously consider race-neutral alternatives as a remedy to the identified discrimination.

Justice Sandra Day O'Connor, speaking for the majority, articulated various methods of demonstrating discrimination and set forth guidelines for crafting MBE programs that are "narrowly tailored" to address systemic racial discrimination.<sup>6</sup> To demonstrate discrimination and

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<sup>5</sup> *Croson*, 488 U.S. at 509.

<sup>6</sup> *Croson*, 488 U.S. at 501-2. Cases involving education and employment frequently refer to the principal concepts applicable to the use of race in government contracting: compelling interest and narrowly tailored remedies. The Supreme Court in *Croson* and subsequent cases provides



survive strict scrutiny, the government must show that it had become a “passive participant” in a system of racial exclusion practiced by the local industry.<sup>7</sup> Methods available to demonstrate patterns of discrimination that satisfy the strict scrutiny analysis include evidence of the government entity’s active and passive participation in the discrimination to be remedied by the proposed race- and gender-conscious goals, systemic discriminatory exclusion, and supporting anecdotal evidence. These methods to construct a strong evidentiary framework are discussed in greater detail below, in *Section IV: Croson Evidentiary Framework*.

## 2. Women Business Enterprise Programs

WBE programs are designed to ensure that women-owned businesses are afforded equal access to public contracting opportunities. WBE programs may contain both gender-conscious and gender-neutral policies and procedures to achieve the objectives of the program. Since *Croson*, which dealt exclusively with the review of race-conscious plans, the United States Supreme Court has remained silent with respect to the appropriate standard of review for geographically-based Women Business Enterprise programs and Local Business Enterprise (LBE) programs. In other contexts, however, the Court has ruled that gender classifications are not subject to the rigorous strict scrutiny standard applied to racial classifications. Instead, gender classifications have been subject only to an “intermediate” standard of review, regardless of the gender favored.

The Sixth Circuit applies both the strict scrutiny standard and the intermediate standard of review to WBE programs. In *Brunet v. City of Columbus*, the Sixth Circuit held that the strict scrutiny standard of review is applied to an affirmative action plan based on gender classification when challenged under the Equal Protection Clause.<sup>8</sup> The court made a distinction between “gender-conscious” plans and “gender-preference” plans. Pursuant to Sixth Circuit precedent, gender-conscious plans are subject to the intermediate standard of review, while gender-preference plans are subject to the strict scrutiny standard of review.<sup>9</sup> The court classifies a program as “gender conscious” if its policies utilize gender as a factor but are gender-neutral in their application and have no disparate impact on individuals based on gender when applied equally to men and women.<sup>10</sup> The court classifies a program as “gender-preference” if its policies contain gender-based criteria.<sup>11</sup>

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fairly detailed guidance on how those concepts are to be treated in contracting. In education and employment, the concepts are not explicated to nearly the same extent. Therefore, references in those cases to “compelling governmental interest” and “narrow tailoring” for purposes of contracting are essentially generic and of little value in determining the appropriate methodology for disparity studies.

<sup>7</sup> *Croson*, 488 U.S. at 492-93.

<sup>8</sup> *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993), cert. denied, 510 U.S. 1164, 114 S. Ct. 1190, 127 L. Ed.2d 540 (1994).

<sup>9</sup> *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993), cert. denied, 510 U.S. 1164, 114 S. Ct. 1190, 127 L. Ed.2d 540 (1994).

<sup>10</sup> *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (citing *Jacobsen v. Cincinnati Board of Education*, 961 F.2d 100, 102 (6th Cir. 1992)).

<sup>11</sup> *Id.*



Notwithstanding the fact that the United States Supreme Court has not ruled on a WBE program, the consensus among the federal circuit courts of appeals is that WBE programs are subject to intermediate scrutiny, rather than the more exacting strict scrutiny standard to which race-conscious programs are subject.<sup>12</sup> Intermediate scrutiny requires the governmental entity to demonstrate that the action taken furthers an “important governmental objective,” employing a method that bears a fair and substantial relation to the goal.<sup>13</sup> The courts have also described the test as requiring an “exceedingly persuasive justification” for classifications based on gender.<sup>14</sup> The Court acknowledged that in “limited circumstances a gender-based classification favoring one sex can be justified if it intentionally and directly assists the members of that sex who are disproportionately burdened.”<sup>15</sup>

Consistent with the United States Supreme Court’s finding with regard to gender classification, the Third Circuit in *Contractors Association of Eastern Pennsylvania v. City of Philadelphia* (“*Philadelphia IV*”) ruled in 1993 that the standard of review governing WBE programs is different from the standard imposed upon MBE programs.<sup>16</sup> The Third Circuit held that, whereas MBE programs must be “narrowly tailored” to a “compelling state interest,” WBE programs must be “substantially related” to “important governmental objectives.”<sup>17</sup> In contrast, an MBE program would survive constitutional scrutiny only by demonstrating a pattern and practice of systemic racial exclusion or discrimination in which a state or local government was an active or passive participant.<sup>18</sup>

The Ninth Circuit, in *Associated General Contractors of California v. City and County of San Francisco* (“*AGCC I*”), held that classifications based on gender require an “exceedingly persuasive justification.”<sup>19</sup> The justification is valid only if members of the gender benefited by the classification actually suffer a disadvantage related to the classification, and the classification does not reflect or reinforce archaic and stereotyped notions of the roles and abilities of women.<sup>20</sup>

The Eleventh Circuit also applied intermediate scrutiny.<sup>21</sup> In its review and affirmation of the district court’s holding, in *Engineering Contractors Association of South Florida v. Metropolitan*

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<sup>12</sup> See *Coral Constr. Co. v. King Cnty.*, 941 F.2d 910, 930-31 (9th Cir. 1991); *Eng’g Constr. Ass’n v. Metro. Dade Cnty.* (“*Dade County II*”), 122 F.3d 895, 907-08 (11th Cir. 1997); see also *Concrete Works of Colo. v. City & Cnty. of Denver*, 321 F.3d 950, 960 (10th Cir. 2003) (“*Concrete Works IV*”); and *H.B. Rowe Co. v. N.C. Dep’t of Transp.*, 615 F.3d 233, 236 (4th Cir. 2010) (“*Rowe*”).

<sup>13</sup> *Miss. Univ. for Women v. Hogan*, 458 U.S. 718, 726 (1982); see also *United States v. Virginia*, 518 U.S. 515, 524 (1996) (“*Virginia*”).

<sup>14</sup> *Hogan*, 458 U.S. at 751; see also *Mich. Rd. Builders Ass’n, Inc. v. Milliken*, 834 F.2d 583, 595 (6th Cir. 1987).

<sup>15</sup> *Hogan*, 458 U.S. at 728; see also *Schlesinger v. Ballard*, 419 U.S. 498, 508 (1975) (“*Ballard*”).

<sup>16</sup> *Contractors Ass’n of E. Pa. v. City of Philadelphia* (“*Philadelphia IV*”), 6 F. 3d 990, 1001 (3d Cir. 1993).

<sup>17</sup> *Philadelphia IV*, 6 F.3d at 1009-10.

<sup>18</sup> *Id.* at 1002.

<sup>19</sup> *Associated Gen. Contractors of Cal. v. City & Cnty. of San Francisco*, 813 F.2d 922, 940 (9th Cir. 1987) (“*AGCC I*”).

<sup>20</sup> *Ballard*, 419 U.S. at 508.

<sup>21</sup> *Ensley Branch N.A.A.C.P. v. Seibels*, 31 F. 3d 1548, 1579-80 (11th Cir. 1994).



*Dade County* (“*Dade County II*”), the Eleventh Circuit cited the Third Circuit’s 1993 formulation in *Philadelphia IV*: “[T]his standard requires the [County] to present probative evidence in support of its stated rationale for the gender preference, discrimination against women-owned contractors.”<sup>22</sup> Although the *Dade County II* appellate court ultimately applied the intermediate scrutiny standard, it queried whether the United States Supreme Court’s decision in *United States v. Virginia*<sup>23</sup>—that the all-male program at Virginia Military Institute was unconstitutional—signaled a heightened level of scrutiny.<sup>24</sup> In the case of *United States v. Virginia*, the Court held that parties who seek to defend gender-based government action must demonstrate an “exceedingly persuasive justification” for that action.<sup>25</sup> While the Eleventh Circuit echoed that speculation, it concluded that “[u]nless and until the U.S. Supreme Court tells us otherwise, intermediate scrutiny remains the applicable constitutional standard in gender discrimination cases, and a gender preference may be upheld so long as it is substantially related to an important governmental objective.”<sup>26</sup>

In *Dade County II*, the Eleventh Circuit court noted that the Third Circuit in *Philadelphia IV* was the only federal appellate court that explicitly attempted to clarify the evidentiary requirement applicable to WBE programs.<sup>27</sup> *Dade County II* interpreted that standard to mean that “evidence offered in support of a gender preference must not only be ‘probative’ it must also be ‘sufficient.’”<sup>28</sup>

It also reiterated two principal guidelines of intermediate scrutiny evidentiary analysis: (1) under this test, a local government must demonstrate some past discrimination against women, but not necessarily discrimination by the government itself;<sup>29</sup> and (2) the intermediate scrutiny evidentiary review is not to be directed toward mandating that gender-conscious affirmative action is used only as a “last resort”<sup>30</sup> but instead ensuring that the affirmative action is “a product of analysis rather than a stereotyped reaction based on habit.”<sup>31</sup>

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<sup>22</sup> *Dade County II*, 122 F.3d at 909 (citing *Philadelphia IV*, 6 F.3d at 1010; see also *Saunders v. White*, 191 F. Supp. 2d 95, 134 (D.D.C. 2002) (stating “[g]iven the gender classifications explained above, the initial evaluation procedure must satisfy intermediate scrutiny to be constitutional.”).

<sup>23</sup> *Virginia*, 518 U.S. at 534.

<sup>24</sup> *Dade County II*, 122 F.3d at 907-08.

<sup>25</sup> *Virginia*, 518 U.S. at 534.

<sup>26</sup> *Dade County II*, 122 F.3d at 908.

<sup>27</sup> *Id.* at 909.

<sup>28</sup> *Dade County II*, 122 F.3d. at 910.

<sup>29</sup> *Id.* (quoting *Ensley Branch*, 31 F.3d at 1580).

<sup>30</sup> *Dade County II*, 122 F.3d. at 910. (quoting *Hayes v. N. State Law Enforcement Officers Ass’n.*, 10 F.3d 207, 217 (4th Cir. 1993) (racial discrimination case).

<sup>31</sup> *Id.* (quoting *Philadelphia IV*, 6 F.3d at 1010).



This determination requires “evidence of past discrimination in the economic sphere at which the affirmative action program is directed.”<sup>32</sup> The court also stated that “a gender-conscious program need not closely tie its numerical goals to the proportion of qualified women in the market.”<sup>33</sup>

### 3. Local Business Enterprise Programs

LBE programs are designed to stimulate the local economy by utilizing businesses on public contracts that are located within a specified geographic boundary. MSD has two local business programs: the Local Labor Preference and the Reciprocal Resident Business Preference for the purposes of promoting employment of individuals domiciled in the Louisville/Jefferson County Metro Government geographic area.<sup>34</sup> For a more detailed discussion of these programs, see *Chapter 2: Procurement Practices and Procedures Analysis*. In *AGCC I*, a pre-*Croson* case, the Ninth Circuit applied the rational basis standard when evaluating the City and County of San Francisco’s Local Business Enterprise (LBE) program, holding that a local government may give a preference to local businesses to address the economic disadvantages those businesses face in doing business within San Francisco.<sup>35</sup>

To survive a constitutional challenge under a rational basis review, the government entity need only demonstrate that the governmental action or program is rationally related to a legitimate government interest.<sup>36</sup> The Supreme Court cautioned government agencies seeking to meet the rational basis standard that, if a race- and gender-neutral program is subjected to a constitutional attack, the facts on which the program is predicated will be subject to judicial review.<sup>37</sup> The rational basis standard of review does not have to be the government’s actual interest. Rather, if the court can merely hypothesize a legitimate interest served by the challenged action, it will withstand the rational basis review.<sup>38</sup> The term rational must convince an impartial lawmaker that the classification would serve a legitimate public purpose that transcends the harm to the members of the disadvantaged class.<sup>39</sup>

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<sup>32</sup> *Dade County II*, 122 F.3d. at 1581.

<sup>33</sup> *Id.* at 929; *cf.*, *Builders Ass’n of Greater Chi. v. Cnty. of Cook*, 256 F. 3d 642, 644 (7th Cir. 2001) (questioned why there should be a lesser standard where the discrimination was against women rather than minorities.).

<sup>34</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15(b)(i) (December 21, 2015).

<sup>35</sup> *AGCC I*, 813 F.2d at 943; *Lakeside Roofing Company v. State of Missouri*, et al., 2012 WL 709276, 39-41 (E.D.Mo. Mar. 5, 2012) (Note that federal judges will generally rule the way that a previous court ruled on the same issue following the doctrine of *stare decisis* – the policy of courts to abide by or adhere to principles established by decisions in earlier cases; however, a decision reached by a different circuit is not legally binding on another circuit court, it is merely persuasive and instructional on the issue).

<sup>36</sup> *Armour v. City of Indianapolis, Ind.*, 132 S. Ct. 2073, 2080 (2012) (quoting *Heller v. Doe*, 509 U.S. 312, 319–320 (1993)).

<sup>37</sup> *Id.*

<sup>38</sup> *Lakeside Roofing*, 2012 WL 709276, 38; *see* KATHLEEN M. SULLIVAN & GERALD GUNTHER, CONSTITUTIONAL LAW FOUNDATION PRESS Chapter 9 (16th ed. 2007).

<sup>39</sup> *Croson*, 488 U.S. at 515.



San Francisco conducted a detailed study of the economic disadvantages faced by San Francisco-based businesses as compared to businesses located in other jurisdictions. The study showed a competitive disadvantage in public contracting for businesses located within the City as compared to businesses from other jurisdictions.

San Francisco-based businesses incurred higher administrative costs in doing business within the City. Such costs included higher taxes, rents, wages, insurance rates, and benefits for labor. In upholding the LBE Ordinance, the Ninth Circuit held “. . . the city may rationally allocate its own funds to ameliorate disadvantages suffered by local businesses, particularly where the city itself creates some of the disadvantages.”<sup>40</sup>

#### **4. Small Business Enterprise Programs**

SBE programs are designed to foster business development for small businesses by maximizing their participation on government contracts. The size standards of the program vary depending on the government agency’s eligibility requirements. A government entity may implement a Small Business Enterprise (SBE) program predicated on a rational basis to ensure adequate small business participation in government contracting. Rational basis is the lowest level of scrutiny and the standard the courts apply to race- and gender-neutral public contracting programs.<sup>41</sup>

### **III. Burden of Proof**

The procedural protocol established by *Croson* imposes an initial burden of proof on the government to demonstrate that the challenged MBE program is supported by a strong factual predicate, i.e., documented evidence of past discrimination. Notwithstanding this requirement, the plaintiff bears the ultimate burden of proof to persuade the court that the MBE program is unconstitutional. The plaintiff may challenge a government’s factual predicate on any of the following grounds:<sup>42</sup>

- Disparity exists due to race-neutral reasons
- Methodology is flawed
- Data are statistically insignificant
- Controverting data exist

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<sup>40</sup> *AGCCI*, 813 F.2d at 943.

<sup>41</sup> *Doe I v. Lower Merion Sch. Dist.*, 689 F. Supp. 2d 742, 748 (E.D. Pa. 2010).

<sup>42</sup> *Contractors Ass'n v. City of Philadelphia*, 893 F. Supp. 419, 430, 431, 433, 437 (E.D. Pa.1995) (“*Philadelphia V*”) (These were the issues on which the district court in Philadelphia reviewed the disparity study before it).



## **A. Initial Burden of Proof**

*Croson* requires defendant jurisdictions to produce a “strong basis in evidence” that the objective of the challenged MBE program is to rectify the effects of past identified discrimination.<sup>43</sup> Whether or not the government has produced a strong basis in evidence is a question of law.<sup>44</sup> The defendant in a constitutional claim against a disparity study has the initial burden of proof to show that there was past discrimination.<sup>45</sup>

Once the defendant meets this initial burden, the burden shifts to the plaintiff to prove that the program is unconstitutional. “[W]hen the proponent of an affirmative action plan produces sufficient evidence to support an inference of discrimination, the plaintiff must rebut that inference in order to prevail.”<sup>46</sup> Because the sufficiency of the factual predicate supporting the MBE program is at issue, factual determinations relating to the accuracy and validity of the proffered evidence underlie the initial legal conclusion to be drawn.<sup>47</sup>

The adequacy of the government’s evidence is “evaluated in the context of the breadth of the remedial program advanced by the [jurisdiction].”<sup>48</sup> The onus is on the jurisdiction to provide a factual predicate that is sufficient in scope and precision to demonstrate that contemporaneous discrimination necessitated the adoption of the MBE program.<sup>49</sup> When the jurisdiction supplies sufficient statistical information to support the inference of discrimination, the plaintiff must prove that the statistical analysis that was utilized to support the challenged program is flawed.<sup>50</sup> The ultimate burden of proof is therefore upon the plaintiff.

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<sup>43</sup> See *Croson*, 488 U.S. at 510; *Philadelphia VI*, 91 F.3d at 597 (citing *Concrete Works of Colo. v. Denver*, 36 F.3d 1513, 1522 (10th Cir. 1994)(“*Concrete Works II*”).

<sup>44</sup> *Id.* (citing *Associated Gen. Contractors v. New Haven*, 791 F. Supp. 941, 944 (D. Conn. 1992)).

<sup>45</sup> *Concrete Works II*, 36 F.3d at 1521-22 (citing *Wygant v. Jackson Bd. of Educ.*, 476 U.S. 267, 292 (1986)).

<sup>46</sup> *Engineering Contractors Ass’n of S. Fla. v. Metropolitan Dade Co.*, 122 F.3d 895, 916 (11<sup>th</sup> Cir. 1997).

<sup>47</sup> *Concrete Works II*, 36 F.3d at 1522.

<sup>48</sup> *Id.* (citing *Croson*, 488 U.S. at 498).

<sup>49</sup> See *Croson*, 488 U.S. at 488.

<sup>50</sup> *Engineering Contractors Ass’n of S. Fla. v. Metropolitan Dade Co.*, 943 F. Supp. 1546, 1558-61 (S.D. Fla. 1996).



## **B. Ultimate Burden of Proof**

Despite the government's obligation to produce a strong factual predicate to support its program the party challenging an MBE program will bear the ultimate burden of proof throughout the course of the litigation.<sup>51</sup> The plaintiff must prove that the program is constitutionally flawed either by challenging the government's factual predicate for the program or by demonstrating that the program is overly broad. A plaintiff "cannot meet its burden of proof through conjecture and unsupported criticism of the evidence."<sup>52</sup>

Joining the majority in stating that the ultimate burden rests with the plaintiff, Justice O'Connor explained the nature of the plaintiff's burden of proof in her concurring opinion in *Wygant v. Jackson Board of Education* ("Wygant"):<sup>53</sup>

[I]t is incumbent upon the nonminority [plaintiffs] to prove their case; they continue to bear the ultimate burden of persuading the court that the [government's] evidence did not support an inference of prior discrimination and thus a remedial purpose, or that the plan instituted on the basis of this evidence was not sufficiently "narrowly tailored."<sup>54</sup>

In *Philadelphia VI*, the Third Circuit clarified this allocation of the burden of proof and the constitutional issue of whether or not facts constitute a "strong basis" in evidence for race-based remedies.<sup>55</sup> That court wrote that the allocation of the burden of persuasion is dependent upon the plaintiff's argument against the constitutionality of the program. If the plaintiff's theory is that an agency has adopted race-based preferences with a purpose other than remedying past discrimination, the plaintiff has the burden of convincing the court that the identified remedial motivation is a pretext and that the real motivation was something else.<sup>56</sup> If, on the other hand, the plaintiff argues there is no existence of past discrimination within the agency, the plaintiff must successfully rebut the agency's evidence and prove its inaccuracy.<sup>57</sup>

However, the ultimate issue of whether sufficient evidence exists to prove past discrimination is a question of law. The burden of persuasion in the traditional sense plays no role in the court's resolution of that ultimate issue.<sup>58</sup>

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<sup>51</sup> See *Wygant*, 476 U.S. at 277-78, 293.

<sup>52</sup> *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 321 F.3d 950, 989 (10<sup>th</sup> Cir. 2003).

<sup>53</sup> *Id.* at 293 (O'Connor, S., concurrence).

<sup>54</sup> *Wygant*, 476 U.S. at 277-78.

<sup>55</sup> *Philadelphia VI*, 91 F.3d at 597.

<sup>56</sup> *Id.* at 597.

<sup>57</sup> *Id.* at 597-598.

<sup>58</sup> At first glance, the Third Circuit and the Eleventh Circuit positions appear to be inconsistent as to whether the issue at hand is a legal issue or a factual issue. However, the two courts were examining the issues in different scenarios. For instance, the Third Circuit was examining whether enough facts existed to determine if past discrimination existed, and the Eleventh Circuit was examining whether the remedy the agency utilized



*Concrete Works VI* made clear that the plaintiff’s burden is an evidentiary one; it cannot be discharged simply by argument. The court cited its opinion in *Adarand Constructors Inc. v. Slater*, 228 F.3d 1147, 1173 (10th Cir. 2000): “[g]eneral criticism of disparity studies, as opposed to particular evidence undermining the reliability of the particular disparity study, is of little persuasive value.”<sup>59</sup> Proof needed to establish a factual predicate for race- and gender-conscious goals as set forth by *Croson* and its progeny is described below in *Section IV*.

The Tenth Circuit and the Eleventh Circuit present alternative approaches to the evidentiary requirements for proof in racial classification cases. This split among the circuits pertains to the allocation of the burden of proof once the initial burden of persuading the court is met that vestiges of discrimination exist.<sup>60</sup>

The Tenth Circuit in *Concrete Works VI* held that the burden of proof rests with the plaintiff to demonstrate that an ordinance is unconstitutional.<sup>61</sup> On the other hand, the Eleventh Circuit in *Hershell* held that the government, as the proponent of the classification, bears the burden of proving that its consideration of race is narrowly tailored to serve a compelling state interest, and that the government must always maintain a “strong basis in evidence” for undertaking affirmative action programs.<sup>62</sup> Therefore, the proponent of the classification must meet a substantial burden of proof, a that sufficient vestiges of discrimination exist to support the conclusion that remedial action is necessary. Within the Eleventh Circuit, judicial review of a challenged affirmative action program focuses primarily on whether the government entity can meet its burden of proof.

In practice, the standards prescribed in the Eleventh Circuit for proving the constitutionality of a proposed M/WBE framework are rooted in *Engineering Contractors Ass’n v. Metropolitan Dade County*, the same Eleventh Circuit case that the Tenth Circuit cited.<sup>63</sup> In *Dade County I*, the court found that a municipality can justify affirmative action by demonstrating “gross statistical disparities” between the proportion of minorities awarded contracts and the proportion of minorities willing and able to do the work, or by presenting anecdotal evidence – especially if buttressed by statistical data.<sup>64</sup>

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was the appropriate response to the determined past discrimination. Therefore, depending upon the Plaintiff’s arguments, a court reviewing an MBE program is likely to be presented with questions of law and fact.

<sup>59</sup> *Concrete Works VI*, 321 F.3d at 979.

<sup>60</sup> *Hershell Gill Consulting Eng’rs, Inc. v. Miami-Dade Cnty.*, 333 F. Supp. 2d 1305, 1325 (S.D. Fla. 2004).

<sup>61</sup> *Concrete Works VI*, 321 F.3d at 959 (quoting *Adarand v. Pena*, 228 F.3d 1147, 1176 (10th Cir. 2000) (“We reiterate that the ultimate burden of proof remains with the challenging party to demonstrate the unconstitutionality of an affirmative-action program.”)).

<sup>62</sup> *Hershell*, 333 F. Supp. 2d at 1305 (stating that *Concrete Works* is not persuasive because it conflicts with the allocation of the burden of proof stated by Eleventh Circuit precedent in *Johnson v. Board of Regents of the University of Georgia*, 263 F.3d 1234, 1244 (11th Cir. 2001)).

<sup>63</sup> 943 F. Supp. 1546 (S.D. Fla. 1996) (“*Dade County I*”).

<sup>64</sup> *Id.* at 1559-60.



## **IV. Croson Evidentiary Framework**

Government entities must construct a strong evidentiary framework to stave off legal challenges and ensure that the adopted MBE program comports with the requirements of the Equal Protection Clause of the United States Constitution. The framework must comply with the requirements of the strict scrutiny standard. Accordingly, there must be a strong basis in evidence of past discrimination, and the race-conscious remedy must be “narrowly tailored,” as set forth in *Croson*.<sup>65</sup> A summary of the appropriate types of evidence to satisfy the first element of the *Croson* standard follows.

### **A. Active and Passive Participation**

*Croson* requires that the entity seeking to adopt an MBE program must have perpetuated the discrimination to be remedied.<sup>66</sup> However, the entity need not have been an active perpetrator of such discrimination. Passive participation will satisfy this part of strict scrutiny review.<sup>67</sup> An entity will be considered an “active” participant if the evidence shows that it created barriers that actively exclude MBEs from its contracting opportunities. An entity will be considered to be a “passive” participant in private sector discriminatory practices if it has infused tax dollars into that discriminatory industry.<sup>68</sup>

Until *Concrete Works I*, the inquiry regarding passive discrimination was limited to the subcontracting practices of government prime contractors. The Tenth Circuit, in *Concrete Works I*, considered a purely private sector definition of passive discrimination, holding that evidence of a government entity infusing its tax dollars into a discriminatory system can show passive discrimination.<sup>69</sup>

In *Concrete Works I*, the District Court granted summary judgment in favor of the City of Denver in 1993.<sup>70</sup> *Concrete Works* appealed to the Tenth Circuit, in *Concrete Works II*, in which the summary judgment in favor of the City of Denver was reversed and the case was remanded to the District Court for trial.<sup>71</sup> With specific instructions permitting the parties “to develop a factual record to support their competing interpretations of the empirical data.”<sup>72</sup> On remand, the district

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<sup>65</sup> *Croson*, 488 U.S. at 486.

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

<sup>67</sup> *Id.* at 492, 509.

<sup>68</sup> *Id.* at 492, accord *Coral Constr.*, 941 F.2d at 916.

<sup>69</sup> *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 823 F. Supp. 821, 824 (D. Colo. 1993)(“*Concrete Works I*”), *rev'd*, 36 F.3d 1513 (10th Cir. 1994), *rev'd*, 86 F. Supp. 2d 1042 (D. Colo. 2000), *rev'd*, 321 F.3d 950 (10th Cir. 2003).

<sup>70</sup> *Concrete Works I*, 823 F. Supp. at 824.

<sup>71</sup> *Concrete Works II*, 36 F.3d at 1530-31.

<sup>72</sup> *Id.*



court entered a judgment in favor of the plaintiff that the City’s ordinances violated the Fourteenth Amendment.<sup>73</sup>

The district court in *Concrete III* rejected the four disparity studies the city offered to support the continuation of Denver's M/WBE program.<sup>74</sup> The court surmised that (1) the methodology employed in the statistical studies was not “designed to answer the relevant questions,”<sup>75</sup> (2) the collection of data was flawed, (3) important variables were not accounted for in the analyses, and (4) the conclusions were based on unreasonable assumptions.<sup>76</sup> The court found that the “most fundamental flaw” in the statistical evidence was the lack of “objective criteria [to] define who is entitled to the benefits of the program and [which groups should be] excluded from those benefits.”<sup>77</sup> The statistical analysis relied on by the City to support its M/WBE program was conducted as a result of the litigation. The statistical evidence proffered by the City to the court was not objective in that it lacked a correlation to the current M/WBE program goals.

The Tenth Circuit on appeal rejected the district court’s analysis because it required Denver to prove the existence of discrimination. Moreover, the Tenth Circuit explicitly held that “passive” participation included private sector discrimination in the marketplace. The court found that marketplace discrimination is relevant where the agency’s prime contractors’ practices are discriminatory against their subcontractors:

The court, however, did set out two conditions which must be met for the governmental entity to show a compelling interest. “First, the discrimination must be identified discrimination.” (citation omitted). The City can satisfy this condition by identifying the discrimination “*public or private*, with some specificity.” (internal quotes and citation omitted).<sup>78</sup>

In *Concrete Works IV*, the Tenth Circuit held that the governmental entity must also have a “strong basis in evidence to conclude that remedial action was necessary.”<sup>79</sup> The Tenth Circuit further held that the city was correct in its attempt to show that it “indirectly contributed to private discrimination by awarding public contracts to firms that in turn discriminated against MBE and/or WBE subcontractors in other private portions of their business.”<sup>80</sup> While the Tenth Circuit noted that the record contained “extensive evidence” of private sector discrimination, the question

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<sup>73</sup> *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 86 F. Supp. 2d 1042, 1079 (D. Colo. 2000)(“*Concrete Works III*”).

<sup>74</sup> *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 86 F. Supp. 2d 1065-68.

<sup>75</sup> *Id.* at 1067, 1071.

<sup>76</sup> *Id.* at 1057-58, 1071.

<sup>77</sup> *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 86 F. Supp. 2d at 1068.

<sup>78</sup> *Concrete Works IV*, 321 F.3d at 975-76.

<sup>79</sup> *Id.* at 976 (quoting *Shaw v. Hunt*, 517 U.S. 804, 909 (1996)).

<sup>80</sup> *Id.* at 976.



of the adequacy of private sector discrimination as the factual predicate for a race-based remedy was not before the court.<sup>81</sup>

Ten months after *Concrete Works IV*, the question of whether a particular public-sector race-based remedy is narrowly tailored when it is based solely on business practices within the private sector was at issue in *Builders Association of Greater Chicago v. City of Chicago*.<sup>82</sup> The plaintiff in *Builders Association of Greater Chicago* challenged the City's construction set-aside program. The court considered pre-enactment and post-enactment evidence in support of the six-year-old M/WBE program.<sup>83</sup> The challenged program consisted of a 16.9 percent MBE subcontracting goal, a 10 percent MBE prime contracting goal, a 4.5 percent WBE subcontracting goal and a 1 percent WBE prime contracting goal.<sup>84</sup>

The district court found that private sector business practices offered by the city, which were based on United States Census data and surveys, constituted discrimination against minorities in the Chicago market area.<sup>85</sup> However, the district court did not find the City's M/WBE subcontracting goal to be a narrowly tailored remedy given the factual predicate. The court found that the study did not provide a meaningful, individualized review of M/WBEs in order to formulate remedies "more akin to a laser beam than a baseball bat."<sup>86</sup> The City was ordered to suspend its M/WBE goals program.

As recently as 2010, the Fourth Circuit in *H.B. Rowe Co. v. Tippett* ruled that the State of North Carolina could not rely on private-sector data to demonstrate that prime contractors underutilized women subcontractors in the general construction industry.<sup>87</sup> The court found that the private sector data did not test whether the underutilization was statistically significant.<sup>88</sup>

## **B. Systemic Discriminatory Exclusion**

*Croson* established that a government enacting a race-conscious contracting program must demonstrate identified systemic discriminatory exclusion on the basis of race or other illegitimate criteria (arguably gender).<sup>89</sup> Thus, it is essential to demonstrate a pattern and practice of

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<sup>81</sup> *Concrete Works IV*, 321 F.3d. at 959, 977, 990.

<sup>82</sup> *Builders Ass'n of Greater Chi. v. City of Chi.*, 298 F. Supp. 2d 725, 732 (N.D. Ill. 2003).

<sup>83</sup> *Id.* at 726, 729, 733-34.

<sup>84</sup> *Builders Ass'n of Greater Chi. v. City of Chi.*, 298 F. Supp. 2d at 729.

<sup>85</sup> *Id.* at 735-37.

<sup>86</sup> *Id.* at 737-39, 742.

<sup>87</sup> *Rowe*, 615 F.3d at 236.

<sup>88</sup> *Id.* at 255.

<sup>89</sup> *Croson*, 488 U.S. at 492; see *Monterey Mech. Co. v. Pete Wilson*, 125 F.3d 702, 713 (9th Cir. 1997); see also *W.H. Scott Constr. Co. v. City of Jackson*, 199 F.3d 206, 218-20 (1999) (held the City's MBE program was unconstitutional for construction contracts because minority participation goals were arbitrarily set and not based on any objective data. Moreover, the Court noted that had the City implemented the



discriminatory exclusion in the relevant market area.<sup>90</sup> Using evidence of the entity’s active or passive participation, as discussed above, past discriminatory exclusion must be identified for each racial group to which a remedy would apply.<sup>91</sup> Broad assertions of societal discrimination will not suffice to support a race- or gender-conscious program.

*Croson* enumerates two ways an entity may establish the requisite factual predicate of discrimination. First, 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 an entity or by the entity’s prime contractors may support an inference of discriminatory exclusion.<sup>92</sup> In other words, when the relevant statistical pool is used, a showing of statistically significant underutilization “may constitute prima facie proof of a pattern or practice of discrimination[.]”<sup>93</sup>

The *Croson* Court made clear that both prime contract and subcontracting data were relevant.<sup>94</sup> The Court observed that “[w]ithout any information on minority participation in subcontracting, it is quite simply impossible to evaluate overall minority representation in the city’s construction expenditures.”<sup>95</sup> Subcontracting data are also an important means by which to assess suggested remedial actions. Because the decision-makers are different for the awarding of prime contracts and subcontracts, the remedies for discrimination identified at a prime contractor versus subcontractor level may also be different.

Second, “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>96</sup> Thus, if a government has statistical evidence that non-minority contractors are systematically excluding minority businesses from subcontracting opportunities, it may act to end the discriminatory exclusion.<sup>97</sup> Once an inference of discriminatory exclusion arises, the entity may act to dismantle the closed business system “*by taking appropriate measures against those who discriminate* on the basis of race or other illegitimate criteria.”<sup>98</sup> *Croson* further states, “In

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recommendations from the disparity study it commissioned, the MBE program may have withstood judicial scrutiny (the City was not satisfied with the study and chose not to adopt its conclusions)).

<sup>90</sup> *Croson*, 488 U.S. at 509.

<sup>91</sup> *Id.* at 506. (The Court stated in *Croson*, “[t]he 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”); *See N. Shore Concrete & Assoc. v. City of New York*, 1998 U.S. Dist. LEXIS 6785 \* 55 (E.D.N.Y. April 12, 1998) (rejected the inclusion of Native Americans and Alaskan Natives in the City’s program).

<sup>92</sup> *Croson*, 488 U.S. at 509.

<sup>93</sup> *Id.* at 501 (citing *Hazelwood Sch. Dist. v. United States*, 433 U.S. 299, 307-08 (1977)).

<sup>94</sup> *Id.* at 502-03.

<sup>95</sup> *Id.*

<sup>96</sup> *Croson*, 488 U.S. at 509.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.* (emphasis added).



*the extreme case*, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.”<sup>99</sup>

In *Coral Construction*, the Ninth Circuit held that both statistical and anecdotal evidence should be relied on in establishing systemic discriminatory exclusion in the relevant marketplace as the factual predicate for an MBE program.<sup>100</sup>

The court explained that statistical evidence, standing alone, often does not account for the complex factors and motivations guiding contracting decisions, many of which may be entirely race-neutral.<sup>101</sup>

Likewise, anecdotal evidence, standing alone, is unlikely to establish a systemic pattern of discrimination.<sup>102</sup> Nonetheless, anecdotal evidence is important because the individuals who testify about their personal experiences bring “the cold numbers convincingly to life.”<sup>103</sup>

## 1. Geographic Market

*Croson* did not speak directly to how the geographic market is to be determined. In *Coral Construction*, the Ninth Circuit held that “an MBE program must limit its geographical scope to the boundaries of the enacting jurisdiction.”<sup>104</sup> Conversely, in *Concrete Works I*, the District Court specifically approved the Denver Metropolitan Statistical Area as the appropriate market area because 80 percent of the construction contracts were based there.<sup>105</sup>

Taken together, these cases support a definition of market area that is reasonable rather than dictated by a specific formula. Because *Croson* and its progeny did not provide a bright-line rule for local market area, the determination should be fact-based. An entity may include consideration of evidence of discrimination within its own jurisdiction.<sup>106</sup> Extra-jurisdictional evidence may be permitted when it is reasonably related to where the jurisdiction contracts.<sup>107</sup>

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<sup>99</sup> *Croson*, 488 U.S. at 509. (emphasis added).

<sup>100</sup> *Coral Constr.*, 941 F.2d. at 919.

<sup>101</sup> *Coral Constr.*, 941 F.2d. at 919.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.* at 919 (quoting *Int’l Bhd. of Teamsters v. United States*, 431 U.S. 324, 339 (1977) (“*Teamster*”).

<sup>104</sup> *Coral Constr.*, 941 F.2d at 925.

<sup>105</sup> *Concrete Works I*, 823 F. Supp. at 835-836 (D. Colo. 1993); *rev’d on other grounds*, 36 F.3d 1513 (10th Cir. 1994).

<sup>106</sup> *Cone Corp. v. Hillsborough Cnty.*, 908 F.2d 908, 915 (11th Cir. 1990); *Associated Gen. Contractors v. Coal. for Econ. Equity*, 950 F.2d 1401, 1415 (9th Cir. 1991) (“*AGCC II*”).

<sup>107</sup> There is a related question of which firms can participate in a remedial program. In *Coral Construction*, the Court held that the definition of “minority business” used in King County’s MBE program was over-inclusive. The Court reasoned that the definition was overbroad because it included businesses other than those who were discriminated against in the King County business community. The program would have allowed, for instance, participation by MBEs who had no prior contact with the County. Hence, location within the geographic area is not enough. An MBE had to have shown that it previously sought business or is currently doing business in the market area.



## 2. Current Versus Historical Evidence

In assessing the existence of discrimination through demonstration of a disparity between MBE utilization and availability, the entity should examine data generated both before and after the current MBE program was enacted. This is referred to as “pre-program” versus “post-program” data.

*Croson* requires that an MBE program be “narrowly tailored” to remedy current evidence of discrimination.<sup>108</sup> Thus, goals must be set according to the evidence of disparity found. For example, if there is a current disparity between the percentage of an entity’s utilization of Hispanic construction contractors and the availability of Hispanic construction contractors in that entity’s marketplace, then that entity can set a goal to bridge that disparity.

It is not mandatory to examine the history of an entity’s utilization to assess current evidence of discrimination. *Croson* indicates that it may be legally fatal to justify an MBE program based on outdated evidence.<sup>109</sup> Therefore, the most recent two or three years of an entity’s utilization data would suffice to determine if a statistical disparity exists between current M/WBE utilization and availability.<sup>110</sup>

## 3. Statistical Evidence

To determine if statistical evidence is adequate to infer discrimination, courts have looked to the “disparity index,” which consists of M/WBE’s shared local contracts divided by a percentage of available firms in the market area.<sup>111</sup> Disparity indexes have been found highly probative evidence of discrimination where they ensure that the “relevant statistical pool” of minority- or women-owned contractors is being considered.<sup>112</sup>

The Third Circuit, in *Philadelphia VI*, ruled that the “relevant statistical pool” includes those businesses that not only exist in the market area but also are qualified and interested in performing

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<sup>108</sup> See *Croson*, 488 U.S. at 509-10.

<sup>109</sup> *Croson*, 488 U.S. at 499 (stating, “[i]t is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination”).

<sup>110</sup> See *AGCC II*, 950 F.2d at 1414 (consultant study looked at City’s MBE utilization over a one-year period).

<sup>111</sup> Although the disparity index is a common category of statistical evidence considered, other types of statistical evidence have been taken into account. In addition to looking at Dade County’s contracting and subcontracting statistics, the district court also considered marketplace data statistics (which looked at the relationship between the race, ethnicity, and gender of surveyed firm owners and the reported sales and receipts of those firms), the County’s Wainwright study (which compared construction business ownership rates of M/WBEs to those of non-M/WBEs and analyzed disparities in personal income between M/WBE and non-M/WBE business owners), and the County’s Brimmer Study (which focused only on Black-owned construction firms and looked at whether disparities existed when the sales and receipts of Black-owned construction firms in Dade County were compared with the sales and receipts of all Dade County construction firms). The court affirmed the judgment that declared appellant’s affirmative action plan for awarding county construction contracts unconstitutional and enjoined the plan’s operation because there was no statistical evidence of past discrimination and appellant failed to consider race and ethnic-neutral alternatives to the plan.

<sup>112</sup> *Rowe*, 615 F.3d at 243-44; see *Dade County I*, 943 F. Supp. at 1546, 1559, *aff’d*, 122 F.3d 895 (11th Cir. 1997); see also *Concrete Works II*, 36 F.3d at 1513, 1523.



the public agency’s work. The Third Circuit rejected the use of a list of licensed businesses to determine whether there was disparity between utilization and availability of M/WBEs in the City of Philadelphia. A license to do business with the City, standing alone, does not indicate either willingness or capability to do work for the City. The Court concluded that this particular statistical disparity did not satisfy *Croson*.<sup>113</sup>

When using a pool of relevant statistical evidence, a disparity between the utilization and availability of M/WBEs can be shown in more than one way. First, the number of M/WBEs utilized by an entity can be compared to the number of available M/WBEs. This is a strict *Croson* “disparity” formula. A significant statistical disparity between the number of M/WBEs that an entity utilizes in a given industry and the number of available M/WBEs in the relevant market area specializing in the specified product/service category would suggest an inference of discriminatory exclusion.

Second, M/WBE dollar participation can be compared to M/WBE availability. This comparison could show a disparity between an entity’s award of contracts to available market-area non-minority male-owned businesses and the award of contracts to M/WBEs. Thus, in *AGCC II*, an independent consultant’s study “compared the number of available MBE prime construction contractors in San Francisco with the amount of contract dollars awarded by the City to San Francisco-based MBEs” over a one-year period.<sup>114</sup> The study found that available MBEs received far fewer construction contract dollars in proportion to their numbers than their available non-minority counterparts.<sup>115</sup> *AGCC* argued that the preferences given to MBEs violated the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution. The District Court determined that *AGCC* demonstrated only a possibility of irreparable injury on the grounds that such injury is assumed when constitutional rights have been alleged to be violated but failed to demonstrate a likelihood of success on the merits. On appeal, the Ninth Circuit affirmed the District Court’s ruling.<sup>116</sup>

Whether a disparity index supports an inference that there is discrimination in the market area depends not only on what is being compared, but also on the statistical significance of any such disparity. In *Croson*, Justice O’Connor opined, “[w]here the gross statistical disparities can be shown, they alone, in a proper case, may constitute a *prima facie* proof of a pattern or practice of discrimination.”<sup>117</sup> However, the United States Supreme Court has not assessed or attempted to cast bright lines for determining if a disparity index is sufficient to support an inference of

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<sup>113</sup> *Philadelphia VI*, 91 F.3d at 601-603. The courts have not spoken to the non-M/WBE component of the disparity index. However, if only as a matter of logic, the “availability” of non-M/WBEs requires that their willingness to be government contractors be established. The same measures used to establish the interest of M/WBEs should be applied to non-M/WBEs.

<sup>114</sup> *AGCC II*, 950 F.2d at 1414.

<sup>115</sup> *Id.* at 1414. Specifically, the study found that MBE availability was 49.5 percent for prime construction, but MBE dollar participation was only 11.1 percent; that MBE availability was 36 percent prime equipment and supplies, but MBE dollar participation was 17 percent; and that MBE availability for prime general services was 49 percent, but dollar participation was 6.2 percent.

<sup>116</sup> *Id.* at 1401.

<sup>117</sup> *Croson*, 488 U.S. at 501 (quoting *Hazelwood Sch. Dist.*, 433 U.S. at 307-308).



discrimination. In the absence of such a formula, the Tenth Circuit determined that the analysis of the disparity index and the findings of its significance are to be judged on a case-by-case basis.<sup>118</sup>

Following the dictates of *Croson*, courts may carefully examine whether or not there are data that show MBEs are qualified, ready, willing, and able to perform.<sup>119</sup> The Tenth Circuit in *Concrete Works II* made the same point. It found that capacity—i.e., if the firm is “able to perform”—is a ripe issue when a disparity study is examined on the merits:

[Plaintiff] has identified a legitimate factual dispute about the accuracy of Denver’s data and questioned if Denver’s reliance on the percentage of MBEs and WBEs available in the marketplace overstates “the ability of MBEs or WBEs to conduct business relative to the industry as a whole because M/WBEs tend to be smaller and less experienced than non-minority owned firms.” In other words, a disparity index calculated on the basis of the absolute number of MBEs in the local market may show greater underutilization than does data that take into consideration the size of MBEs and WBEs.<sup>120</sup>

Notwithstanding that appellate concern, the disparity studies before the district court on remand did not examine the issue of M/WBEs’ capacity to perform Denver’s public-sector contracts.

The Sixth Circuit, in *Associated General Contractors of Ohio, Inc. v. Drabik* (“*Drabik*”), concluded that for statistical evidence to meet the standard set in *Croson*, it must consider the issue of capacity.<sup>121</sup> The State’s factual predicate study based its statistical evidence on the percentage of MBE’s in the area. The statistical evidence “did not take into account the number of minority businesses that were construction firms, let alone how many were qualified, willing, and able to perform state contracts.”<sup>122</sup> The court reasoned as follows:

Even statistical comparisons that might be apparently more pertinent, such as with the percentage of all firms qualified in some minimal sense, to perform the work in question, would also fail to satisfy the Court’s criteria. If MBEs comprise 10 percent of the total number of contracting firms in the State, but only get 3 percent of the dollar value of certain contracts that does not alone show discrimination, or even disparity. It does not account for the relative size of the firms, either in terms

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<sup>118</sup> *Concrete Works II*, 36 F.3d at 1522.

<sup>119</sup> The *Philadelphia* study was vulnerable on this issue.

<sup>120</sup> *Concrete Works II*, 36 F.3d at 1528.

<sup>121</sup> *Associated Gen. Contractors of Ohio, Inc. v. Drabik*, 214 F.3d 730, 734-38 (6th Cir. 2000) (“*Drabik*”). The Court reviewed Ohio’s 1980, pre-*Croson*, program, which the Sixth Circuit found constitutional in *Ohio Contractors Ass’n v. Keip*, 713 F.2d 167, 176 (6th Cir. 1983), finding the program unconstitutional under *Croson*.

<sup>122</sup> *Drabik*, 214 F.3d at 736.



of their ability to do particular work or in terms of the number of tasks they have resources to complete.<sup>123</sup>

The court found that that the State not only relied on the wrong type of data, but also that the datasets were more than 20 years old. Therefore, an entity must study current data that indicate the availability and qualifications of the MBEs.

The opinions in *Philadelphia VI*<sup>124</sup> and *Dade County I*<sup>125</sup> regarding disparity studies involving public sector contracting are particularly instructive in defining availability. In *Philadelphia VI*, the earlier of the two decisions, contractors' associations challenged a city ordinance that created set-asides for minority subcontractors on city public works contracts. The Third Circuit granted summary judgment in favor of the contractors.<sup>126</sup> The Third Circuit, affirmed that there was no firm basis in evidence that race-based discrimination existed to justify a race-based program and that the program was not narrowly tailored to address past discrimination by the City.<sup>127</sup>

The Third Circuit reviewed the evidence of discrimination in prime contracting and found that it was unnecessary to determine whether the evidence was strong enough to infer discrimination because the subcontracting program was not narrowly tailored to remedy prime contracting discrimination.<sup>128</sup>

The only subcontracting evidence presented was a review of a random 25 to 30 percent of project engineer logs on projects valued at more than \$30,000.<sup>129</sup> The consultant determined that no MBEs were used during the study period based on recollections of the former general counsel to the General and Specialty Contractors Association of Philadelphia regarding whether or not the owners of the utilized firms were MBEs. The court found this evidence insufficient as a basis for finding that prime contractors in the market area were discriminating against subcontractors.<sup>130</sup>

The Third Circuit has recognized that consideration of qualifications can be approached at different levels of specificity and that the practicality of the approach should also be weighed. It found that “[i]t would be highly impractical to review the hundreds of contracts awarded each

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<sup>123</sup> *Drabik*, 214 F.3d at 736.

<sup>124</sup> *Philadelphia VI*, 91 F.3d at 604-605.

<sup>125</sup> *Dade County I*, 943 F. Supp. at 1582-83.

<sup>126</sup> *Philadelphia VI*, 91 F.3d at 590.

<sup>127</sup> *Philadelphia VI*, 91 F.3d at 609-10.

<sup>128</sup> *Philadelphia VI*, 91 F.3d at 605.

<sup>129</sup> *Id.* at 600.

<sup>130</sup> Another problem with the program was that the 15 percent goal was not based on data indicating that minority businesses in the market area were available to perform 15 percent of the City's contracts. The court noted, however, that “we do not suggest that the percentage of the preferred group in the universe of qualified contractors is necessarily the ceiling for all set-asides.” The court also found the program flawed because it did not provide sufficient waivers and exemptions, as well as consideration of race-neutral alternatives.



year and compare them to each and every MBE” and that it was a “reasonable choice” under the circumstances to use a list of certified M/WBE contractors as a source for available firms.<sup>131</sup> Although it may have been possible to adopt a more refined approach, the court found that using the list of certified contractors was a rational approach to identifying qualified firms.<sup>132</sup>

The federal certification program required firms to detail their bonding capacity, size of prior contracts, number of employees, financial integrity, and equipment owned. According to the court, “the process by which the firms were certified [suggests that] those firms were both qualified and willing to participate in public works projects.”<sup>133</sup> The court found certification to be an adequate process of identifying capable firms, recognizing that the process may even understate the availability of MBE firms.<sup>134</sup> Therefore, the court was somewhat flexible in evaluating the appropriate method of determining the availability of MBE firms in the statistical analysis of a disparity.

Furthermore, the court discussed if bidding were required in prime construction contracts as the measure of “willingness” and stated, “[p]ast discrimination in a marketplace may provide reason to believe the minorities who would otherwise be willing are discouraged from trying to secure work.”<sup>135</sup>

In *Dade County I*, the District Court held that the County had not shown the compelling interest required to institute a race-conscious program, because the statistically significant disparities on which the County relied could be better explained by factors other than discrimination. Statistical disparities existed only when disparity was measured between the proportion of minority businesses and the proportion of contract dollars that the firms received, but statistical disparities did not exist in the award of contracts to minority business. The court determined that the conflicts present in the statistical analysis were likely due to the County’s failure to account for business size in the availability analysis.<sup>136</sup> The District Court accepted the disparity study’s limiting of “available” prime construction contractors to those that had bid at least once in the study period. However, it must be noted that relying solely on bidders to identify available firms may have limitations. If the solicitation of bidders is biased, then the results of the bidding process will be

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<sup>131</sup> *Philadelphia VI*, 91 F.3d at 603.

<sup>132</sup> *Philadelphia VI*, 91 F.3d at 603-605, 609.

<sup>133</sup> *Philadelphia VI*, 91 F.3d at 603.

<sup>134</sup> *Id.*

<sup>135</sup> *Philadelphia VI*, 91 F.3d at 603.

<sup>136</sup> *Dade County I*, 943 F. Supp. at 1560-64.



biased.<sup>137</sup> In addition, a comprehensive count of bidders is dependent on the adequacy of the agency's record-keeping.<sup>138</sup>

The appellate court in *Dade County* did not determine if the County presented sufficient evidence to justify the M/WBE program. It merely affirmed the lower court's conclusion that the County lacked a strong basis in evidence to justify race-conscious affirmative action.<sup>139</sup> The appellate court did not prescribe the District Court's analysis or any other specific analysis for future cases.

### **C. Anecdotal Evidence**

In *Croson*, Justice O'Connor opined that "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>140</sup> Anecdotal evidence should be gathered to determine if minority contractors are systematically being excluded from contracting opportunities in the relevant market area. Remedial measures fall along a sliding scale determined by their intrusiveness on non-targeted groups. At one end of the spectrum are race-neutral measures and policies, such as outreach to all segments of the business community, regardless of race. They are not intrusive and, in fact, require no evidence of discrimination before implementation. At the other end of the spectrum are race-conscious measures, such as set-asides, a foundation in which requires statistically significant evidence.<sup>141</sup>

As discussed below, anecdotal evidence alone is insufficient to establish the requisite predicate for a race-conscious program. Its great value lies in pointing to remedies that are "narrowly tailored"—the second prong of a *Croson* study. The following types of anecdotal evidence were presented to the Ninth Circuit in both *Coral Construction* and *AGCC II* to justify the existence of an M/WBE program:

- M/WBEs denied contracts despite being the low bidders — *Philadelphia*<sup>142</sup>
- Prime contractors showing MBE bids to non-minority subcontractors to find a non-minority firm to underbid the MBEs — *Cone Corporation v. Hillsborough County*<sup>143</sup>

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<sup>137</sup> Cf. *League of United Latin Am. Citizens v. Santa Ana*, 410 F. Supp. 873, 897 (C.D. Cal. 1976); *Reynolds v. Sheet Metal Workers, Local 102*, 498 F. Supp. 952, 964 n. 12 (D. D.C. 1980), *aff'd*, 702 F.2d 221 (D.C. Cir. 1981) (involving the analysis of available applicants in the employment context).

<sup>138</sup> Cf. *EEOC v. Am. Nat'l Bank*, 652 F.2d 1176, 1196-1197 (4th Cir. 1981), *cert. denied*, 459 U.S. 923 (1981) (in the employment context, actual applicant flow data may be rejected where race coding is speculative or nonexistent).

<sup>139</sup> *Dade County I*, 943 F. Supp. at 1557; *Dade County II*, 122 F.3d at 904

<sup>140</sup> *Croson*, 488 U.S. at 509; *see Teamsters*, 431 U.S. at 338.

<sup>141</sup> Cf. *AGCC II*, 950 F.2d at 1417-18 (in finding that an ordinance providing for bid preferences was narrowly tailored, the Ninth Circuit stated that the program encompassed the required flexibility and stated that "the burdens of the bid preferences on those not entitled to them appear relatively light and well distributed. . . . In addition, in contrast to remedial measures struck down in other cases, those bidding have no settled expectation of receiving a contract. [Citations omitted.]").

<sup>142</sup> *Philadelphia*, 6 F.3d at 994-5.

<sup>143</sup> *Cone Corp.*, 908 F.2d at 916.



- M/WBEs’ inability to obtain contracts for private sector work — *Coral Construction*<sup>144</sup>
- M/WBEs told they were not qualified, although they were later found to be qualified when evaluated by outside parties — *AGCC II*<sup>145</sup>
- Attempts to circumvent M/WBE project goals — *Concrete Works II*<sup>146</sup>
- Harassment of M/WBEs by an entity’s personnel to discourage them from bidding on an entity’s contracts — *AGCC II*<sup>147</sup>

When determining the appropriate corrective measures, Courts must assess the extent to which relief measures disrupt settled “rights and expectations.”<sup>148</sup> Presumably, courts would look more favorably upon anecdotal evidence in support of a less intrusive program than a more intrusive one. For example, if anecdotal accounts reveal experiences of discrimination in obtaining bonds, they may constitute sufficient evidence to support a bonding program that assists M/WBEs.<sup>149</sup> However, these accounts would not justify a racially-limited program such as a set-aside.

As noted above, the *Croson* Court found that the City of Richmond’s MBE program was unconstitutional because the City failed to provide a factual basis to support its MBE program. However, the Court opined that “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>150</sup>

In part, it was the absence of statistical evidence that proved fatal to the program. The Supreme Court stated that “[t]here was no direct evidence of race discrimination on the part of the city in letting contracts or any evidence that the city’s prime contractors had discriminated against minority-owned subcontractors.”<sup>151</sup>

This was not the situation confronting the Ninth Circuit in *Coral Construction*. There, the 700-plus page appellate record contains the affidavits of “at least 57 minority or women contractors, each of whom complain in varying degree of specificity about discrimination within the local construction industry. . . . These affidavits certainly suggest that ongoing discrimination may be occurring in much of the King County business community.”<sup>152</sup>

<sup>144</sup> For instance, where a small percentage of an MBE or WBE’s business comes from private contracts and most of its business comes from race or gender-based set-asides, this would demonstrate exclusion in the private industry. *Coral Constr.*, 941 F.2d at 933 (WBE’s affidavit indicated that less than 7 percent of the firm’s business came from private contracts and that most of its business resulted from gender-based set-asides).

<sup>145</sup> *AGCC II*, 950 F.2d at 1415.

<sup>146</sup> *Concrete Works II*, 36 F.3d at 1530.

<sup>147</sup> *AGCC II*, 950 F.2d at 1415.

<sup>148</sup> *Wygant*, 476 U.S. at 283.

<sup>149</sup> *Teamsters*, 431 U.S. at 339; *Coral Constr.*, 941 F.2d at 919.

<sup>150</sup> *Croson*, 488 U.S. at 509 (citing *Teamsters*, 431 U.S. at 338).

<sup>151</sup> *Id.* at 480.

<sup>152</sup> *Coral Constr.*, 941 F.2d at 917-18.



Nonetheless, this anecdotal evidence alone was insufficient to justify King County’s MBE program because “[n]otably absent from the record, however, is *any* statistical data in support of the County’s MBE program.”<sup>153</sup> After noting the Supreme Court’s reliance on statistical data in Title VII employment discrimination cases and cautioning that statistical data must be used carefully, the court elaborated on its mistrust of purely anecdotal evidence:

Unlike the cases resting exclusively upon statistical deviations to prove an equal protection violation, the record here contains a plethora of anecdotal evidence. However, anecdotal evidence, standing alone, suffers the same flaws as statistical evidence. Indeed, anecdotal evidence may even be less probative than statistical evidence in the context of proving discriminatory patterns or practices.<sup>154</sup>

The court concluded by observing that “rarely, if ever, can such evidence show a systemic pattern of discrimination necessary for the adoption of an affirmative action plan.”<sup>155</sup>

Two other circuit courts also suggested that anecdotal evidence might be dispositive in rare and exceptional cases, if ever, while rejecting it in the cases before them. For example, in *Philadelphia IV*, the Third Circuit noted that the Philadelphia City Council had “received testimony from at least fourteen minority contractors who recounted personal experiences with racial discrimination,” which the District Court had “discounted” because it deemed this evidence to be “impermissible” for consideration under *Croson*.<sup>156</sup> The Third Circuit disapproved of the district court’s actions because, in its view, the court’s rejection of this evidence betrayed the court’s role in disposing of a motion for summary judgment.<sup>157</sup> “Yet,” the court stated:

Given *Croson*’s emphasis on statistical evidence, even had the district court credited the City’s anecdotal evidence, we do not believe this amount of anecdotal evidence is sufficient to satisfy strict scrutiny [quoting *Coral*, supra]. Although anecdotal evidence alone may, in an exceptional case, be so dominant or pervasive that it passes muster under *Croson*, it is insufficient here.<sup>158</sup>

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<sup>153</sup> *Id.* at 918 (emphasis added) (additional statistical evidence gathered after the program had been implemented was also considered by the court and the case was remanded to the lower court for an examination of the factual predicate).

<sup>154</sup> *Coral Constr.*, 941 F.2d at 919.

<sup>155</sup> *Id.*

<sup>156</sup> *Philadelphia IV*, 6 F.3d at 1002.

<sup>157</sup> *Id.* at 1003.

<sup>158</sup> *Id.*



The District of Columbia Circuit Court echoed the Ninth Circuit’s acknowledgment of the rare case in which anecdotal evidence is singularly potent in *O’Donnell Construction v. District of Columbia*.<sup>159</sup> The court found that, in the face of conflicting statistical evidence, anecdotal evidence was not sufficient:

It is true that in addition to statistical information, the Committee received testimony from several witnesses attesting to problems they faced as minority contractors. Much of the testimony related to bonding requirements and other structural impediments any firm would have to overcome, no matter what the race of its owners. (internal citation omitted.) The more specific testimony about discrimination by white firms could not in itself support an industry-wide remedy (internal quotes and citation omitted). Anecdotal evidence is most useful as a supplement to strong statistical evidence—which the Council did not produce in this case.<sup>160</sup>

The Eleventh Circuit in *Dade County II* is in accord. In applying the “clearly erroneous” standard to its review of the district court’s decision in *Dade County II*, it commented that “[t]he picture painted by the anecdotal evidence is not a good one.”<sup>161</sup> However, it held that this was not the “exceptional case” where, unreinforced by statistics, the anecdotal evidence was enough.<sup>162</sup>

In *Concrete Works II*, the Tenth Circuit described the anecdotal evidence that is most compelling within a statistical context. In approving of the anecdotal evidence marshaled by the City of Denver in the proceedings, the court recognized that “[w]hile a fact finder should accord less weight to personal accounts of discrimination that reflect isolated incidents, anecdotal evidence of a municipality’s institutional practices carries more weight due to the systemic impact that such institutional practices have on market conditions.”<sup>163</sup> The court noted that the City had provided such systemic evidence.

The Ninth Circuit articulated its standard for permissible anecdotal evidence in *AGCC II*.<sup>164</sup> There, the court approved a “vast number of individual accounts of discrimination,” which included (1) numerous reports of MBEs denied contracts despite being the low bidder, (2) MBEs told that they were not qualified although they were later found to be qualified when evaluated by outside parties, (3) MBEs refused work even after they were awarded the contracts as low bidder, and (4) MBEs being harassed by City personnel to discourage them from bidding on City contracts. On appeal, the City pointed to numerous individual accounts of discrimination to

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<sup>159</sup> *O’Donnell Construction v. District of Columbia*, 963 F. 2d 420, 427 (D.C. Cir. 1992).

<sup>160</sup> *O’Donnell*, 963 F.2d at 427.

<sup>161</sup> *Dade County II*, 122 F.3d at 925.

<sup>162</sup> *Id.* at 926.

<sup>163</sup> *Concrete Works II*, 36 F.3d at 1530.

<sup>164</sup> *AGCC II*, 950 F.2d at 1401.



substantiate its findings that discrimination exists in the city's procurement processes, a "good old boys" network still exists, and racial discrimination is still prevalent within the San Francisco construction industry.<sup>165</sup> Based on *AGCC II*, it would appear that the Ninth Circuit has a more lenient standard for acceptable anecdotal evidence than other circuit courts that have considered the issue.

Taken together, these statements constitute a taxonomy of appropriate anecdotal evidence. Anecdotal evidence alone may, in exceptional cases, show a systemic pattern of discrimination necessary for the adoption of an affirmative action plan, but documented the discrimination must be so dominant and pervasive that the anecdotal evidence passes muster under the *Croson* standards.<sup>166</sup>

Case law, pursuant to *Croson* and its progeny, suggests that, to be optimally persuasive, anecdotal evidence should satisfy six requirements, that it:

- Is gathered from minority contractors, preferably those that are "qualified"<sup>167</sup>
- Concerns specific, verifiable instances of discrimination<sup>168</sup>
- Involves the actions of governmental officials<sup>169</sup>
- Involves events within the relevant jurisdiction's market area<sup>170</sup>
- Discusses the harm that the improper conduct has inflicted on the businesses in question<sup>171</sup>
- Collectively reveals that discriminatory exclusion and impaired contracting opportunities are systemic rather than isolated or sporadic.<sup>172</sup>

Given that neither *Croson* nor its progeny identify the circumstances under which anecdotal evidence alone will carry the day, it is not surprising that none of these cases specifies the quantity of anecdotal evidence needed to support an MBE program. However, the foregoing cases provide some guidance by implication. *Philadelphia IV* makes clear that 14 anecdotal accounts standing alone will not suffice.<sup>173</sup> The court then turned to the statistical data.<sup>174</sup> In *Coral Construction*, 57

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<sup>165</sup> *AGCC II*, 950 F.2d at 1415.

<sup>166</sup> *Philadelphia IV*, 6 F.3d at 1003. The anecdotal evidence must be "dominant or pervasive."

<sup>167</sup> *Philadelphia VI*, 91 F.3d at 603.

<sup>168</sup> *Coral Constr.*, 941 F.2d at 917-18; *but see Concrete Works IV*, 321 F.3d at 989 ("There is no merit to [plaintiff's] argument that the witnesses' accounts must be verified to provide support for Denver's burden.").

<sup>169</sup> *Croson*, 488 U.S. at 509.

<sup>170</sup> *Coral Constr.*, 941 F.2d at 925.

<sup>171</sup> *O'Donnell*, 963 F.2d at 427.

<sup>172</sup> *Coral Constr.*, 941 F.2d at 919.

<sup>173</sup> *Philadelphia IV*, 6 F.3d. at 1002-03.

<sup>174</sup> *Philadelphia IV*, 6 F.3d. at 1002-03.



accounts, many of which appeared to be of the type referenced above, were insufficient without statistical data to justify the program in *Coral Construction*.

The amount of anecdotal evidence that a court may find acceptable will depend on the proposed remedy. The remedies that are least burdensome to non-targeted groups would likely require a lesser degree of evidence. Those remedies that are more burdensome on the non-targeted groups would require a stronger factual basis.

#### **D. Remedial Statutory Scheme**

*H.B. Rowe Company v. Tippett*, (“*Rowe*”) challenged the constitutionality of the North Carolina General Assembly’s Statute 136-28.4 (Statute), promulgated in 1983.<sup>175</sup> The Statute set forth a general policy to promote the use of small, businesses and those owned by members of minority groups, people with disabilities, and women in non-federally funded State construction projects.<sup>176</sup> The 1983 Statute directed North Carolina Department of Transportation (NCDOT) to encourage and promote the policy.<sup>177</sup> Seven years later, in 1990, the Statute was amended to include specific goals for participation on state funded transportation construction contracts of minority and women-owned businesses.<sup>178</sup>

As a result of the amendment, NCDOT created a Minority Business Enterprise and Women Business Enterprise Program (M/WBE Program) for non-federally funded highway and bridge construction contracts.<sup>179</sup> In 1991, the constitutionality of the Statute was challenged.<sup>180</sup> The court ruled in favor of the plaintiff, stating that, in order to implement race-conscious measures to remedy discrimination, the government must identify with “some specificity” the racial discrimination it seeks to remedy.<sup>181</sup> As a result of the challenge, NCDOT suspended its M/WBE program in 1991.<sup>182</sup>

In 1993, NCDOT commissioned a disparity study on state-funded transportation construction contracts.<sup>183</sup> The study determined that minority and women subcontractors were underutilized at a statistically significant level and the M/WBE program was re-implemented.<sup>184</sup> In 1998, the

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<sup>175</sup> *Rowe*, 615 F.3d at 236.

<sup>176</sup> *Rowe*, 615 F.3d at 236.

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

<sup>180</sup> *Id.* at 237; see *Dickerson Carolina, Inc. v. Harrelson*, 114 N.C. App. 693 (1994).

<sup>181</sup> *Rowe*, 615 F.3d at 237 (citing *Croson*, 488 U.S. at 504).

<sup>182</sup> *Id.*

<sup>183</sup> *Id.*

<sup>184</sup> *Rowe*, 615 F.3d at 237.



North Carolina General Assembly commissioned an update to the 1993 study.<sup>185</sup> The 1998 update concluded that minority- and women-owned businesses continued to be underutilized in state-funded road construction contracts.<sup>186</sup>

In 2002, H.B. Rowe Company was denied a NCDOT contract because the company's bid included 6.6 percent women subcontractor participation and no minority subcontractor participation.<sup>187</sup> NCDOT claimed that H.B. Rowe Company failed to meet the good faith effort requirements of the M/WBE program.<sup>188</sup> A third study of minority and women contractor participation in the State's highway construction industry was commissioned in 2004.<sup>189</sup> In 2006, relying on the 2004 study, the North Carolina General Assembly amended Statute 136-28.4.<sup>190</sup> The principal modifications were:

- Remedial action should be taken only when there is a strong basis in evidence of ongoing effects of past or present discrimination that prevents, or limits minority- and women-owned businesses from participating as subcontractors in State-funded projects.
- The minority/women classification was limited to those groups that suffered discrimination.
- A disparity study should be performed every five years to respond to changing conditions.
- Inclusion of a sunset provision.<sup>191</sup>

First, the court considered whether the statutory scheme as it related to minorities survived the strict scrutiny standard. The Fourth Circuit reviewed the 2004 disparity study to determine if the statutory scheme was based on strong statistical evidence to implement race-conscious subcontractor goals.<sup>192</sup>

The statistical evidence was also examined to determine if the statute's definition of minorities was over-inclusive by including minority groups that did not suffer discrimination pursuant to the statistical results of the 2004 disparity study.<sup>193</sup>

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<sup>185</sup> *Rowe*, 615 F.3d at 237.

<sup>186</sup> *Id.*

<sup>187</sup> *Rowe*, 615 F.3d at 237.

<sup>188</sup> *Rowe*, 615 F.3d at 237.

<sup>189</sup> *Id.* at 238.

<sup>190</sup> *Rowe*, 615 F.3d at 238.

<sup>191</sup> *Id.* at 238-39.

<sup>192</sup> *Rowe*, 615 F.3d at 239.

<sup>193</sup> *Rowe*, 615 F.3d at 239.



The court did not consider if the statistical methodology employed in the 2004 disparity study was sufficient to support a compelling state interest. Rather, the court accepted the disparity index as the measure by which to determine the statistical significance of the underutilization of minorities in the State’s subcontracts.<sup>194</sup> The methodology used in the 2004 disparity study calculated a disparity at .05 confidence level.<sup>195</sup> A statistical calculation is significant at the .05 confidence level because the probability of that result occurring by chance is 5 percent or less.<sup>196</sup> The .05 confidence level is used in social and physical sciences as a marker of when a result is a product of some external influence, rather than ordinary variation or sampling error.<sup>197</sup>

While the circuit court found that “*the study itself* sets out the standard by which one could confidently conclude that discrimination was at work[,]” the standard was not followed in the State’s statutory scheme.<sup>198</sup> The statistical evidence in the 2004 disparity study demonstrated that African American and Native American subcontractors were underutilized at a disparity index of less than 80 and that Hispanic American and Asian American subcontractors also were underutilized, but not at a .05 confidence level.<sup>199</sup> The 2004 Study determined that the underutilization of Hispanic American and Asian American contractors was not statistically significant.

Therefore, the only statutory scheme ruled narrowly tailored to achieve the State’s compelling interest was the one related to African American and Native American subcontractors. The statutory scheme pertaining to Hispanic American and Asian American subcontractors was deemed unconstitutional.<sup>200</sup> Thus, the State only provided a strong basis in evidence for the minority subcontractor participation goals pertaining to African American and Native American subcontractors.

Second, the court considered whether or not the statutory scheme as it relates to women survives the intermediate scrutiny standard. The evidence demonstrated that the State’s prime contractors “substantially over-utilized” women-owned businesses on public road construction projects.<sup>201</sup> The 2004 disparity study calculated the overutilization of women subcontractors as statistically significant at a .05 confidence level, which the court alternatively described as the 95% confidence

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<sup>194</sup> *Rowe*, 615 F.3d. at 243-44.

<sup>195</sup> *Id.* at 244.

<sup>196</sup> *Rowe*, 615 F.3d. at 261 n. (citing SHERRI L. JACKSON, RESEARCH METHODS AND STATISTICS: A CRITICAL THINKING APPROACH 168-69 (3d ed. 2006) (noting that the .05 confidence level is generally used in the social sciences as indication that the result was produced as a consequence of an external influence)).

<sup>197</sup> *Rowe*, 615 F.3d at 261 n. 12 (citing EARL BABBIE, THE PRACTICE OF SOCIAL RESEARCH 483 (11th ed. 2007)).

<sup>198</sup> *Id.* at 261.

<sup>199</sup> *Id.* at 245.

<sup>200</sup> *Id.* at 254.

<sup>201</sup> *Rowe*, 615 F.3d at 254.



level.<sup>202</sup> The circuit court further noted that the private sector evidence was insufficient to overcome the strong evidence of overutilization.<sup>203</sup> Consequently, the circuit court determined that the evidence in the 2004 disparity study did not provide “exceedingly persuasive justification” to include women-owned businesses in gender-based remedies.<sup>204</sup>

In light of the *Rowe* decision, caution should be exercised when determining which minority or gender group is appropriate for race-conscious or gender-conscious remedies. For an MBE program to be narrowly tailored, there must be a statistical finding of underutilization of minority subcontractors. When the underutilization of a minority group is not found to be statistically significant, the minority group should not be included in race-conscious remedies.

The intermediate scrutiny standard for gender classifications can be met with statistical evidence of underutilization that is not statistically significant. However, this does not apply when there is demonstrated overutilization. Women-owned businesses should be considered for gender-based remedies when the statistical evidence demonstrates that the overutilization is not statistically significant.

## **V. Consideration of Race-Neutral Options**

A remedial program must address the source of the disadvantage faced by minority businesses. If it is found that race discrimination places MBEs at a competitive disadvantage, an MBE program may seek to counteract the situation by providing MBEs with a counterbalancing advantage.<sup>205</sup> An MBE program cannot stand if the sole barrier to M/WBE participation is a barrier that is faced by all new businesses, regardless of ownership.<sup>206</sup> If the evidence demonstrates that the sole barrier to M/WBE participation is that M/WBEs disproportionately lack capital or cannot meet bonding requirements, then only a race-neutral program of financing for all small firms would be justified.<sup>207</sup> In other words, if the barriers to minority participation are race-neutral, then the remedy must be race-neutral.

The requirement that race-neutral measures be considered does not mean that they must be exhausted before race-conscious remedies can be employed. The Supreme Court explained that, although “narrow tailoring does not require exhaustion of every conceivable race-neutral alternative,” it “does require serious, good faith consideration of workable race-neutral alternatives that will achieve ... diversity[.]”<sup>208</sup>

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<sup>202</sup> *Rowe*, 615 F.3d. at 254-55.

<sup>203</sup> *Rowe*, 615 F.3d. at 255.

<sup>204</sup> *Id.*

<sup>205</sup> *AGCC II*, 950 F.2d at 1417.

<sup>206</sup> *Croson*, 488 U.S. at 508.

<sup>207</sup> *Croson*, 488 U.S. at 507.

<sup>208</sup> *Grutter v. Bollinger*, 539 U.S. 306, 339 (2003).



If the barriers appear race-related but are not systemic, then the remedy should be aimed at the specific arena in which exclusion or disparate impact has been found as detailed above in *Section IV*. If the evidence shows that in addition to capital and bonding requirements, which are race-neutral, MBEs also face race discrimination in the awarding of contracts, then a race-conscious program will stand, as long as it also includes race-neutral measures to address the capital and bonding barriers.<sup>209</sup>

The Ninth Circuit Court of Appeals in *Coral Construction* ruled that there is no requirement that an entity exhaust every possible race-neutral alternative.<sup>210</sup> Instead, an entity must make a serious, good faith consideration of race-neutral measures in enacting an MBE program. Thus, in assessing MBE utilization, it is imperative to examine barriers to MBE participation that go beyond “small business problems.” The impact on the distribution of contract programs that have been implemented to improve MBE utilization should also be measured.<sup>211</sup>

## **VI. Conclusion**

The decision of the United States Supreme Court in the *Croson* case changed the legal landscape for business affirmative action programs. The Court altered the authority of a government to use local funds to institute remedial race-conscious public contracting programs. This chapter has examined what *Croson* and its progeny require for a government to institute a constitutional race-and/or gender-conscious public contracting program.

The Interim Supplier Diversity Policy was adopted by the Board of the Louisville and Jefferson County Metropolitan Sewer District on December 1, 2015. The Policy replaced MSD’s Supplier Diversity Contractor Compliance Program pending the findings from this Study. Recommendations to update the Interim Supplier Diversity Policy are set forth in *Chapter 11: Recommendations*. The program recommendations are based on a constitutionally-sound factual predicate of statistically significant disparity.

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<sup>209</sup> *Croson*, 488 U.S. at 507 (upholding MBE program where it operated in conjunction with race-neutral measures aimed at assisting all small businesses).

<sup>210</sup> *Coral Constr.*, 941 F.2d at 923.

<sup>211</sup> *Dade County II*, 122 F.3d at 927. At the same time, the Eleventh Circuit’s caveat in *Dade County* should be kept in mind: “Supreme Court decisions teach that a race-conscious remedy is not merely one of many equally acceptable medications that a government may use to treat race-based problems. Instead, it is the strongest of medicines, with many potentially harmful side-effects, and must be reserved to those severe cases that are highly resistant to conventional treatment.” For additional guidance, see *supra* section II, Standard of Review for the discussion of narrow tailoring in *Concrete Works IV*, *Adarand*, *County of Cook*, and *City of Chicago*.



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# **CHAPTER 2: Procurement Practices and Procedures Analysis**

## **I. Introduction**

This chapter is an overview of Louisville and Jefferson County Metropolitan Sewer District (MSD) policies governing the procurement of construction, construction-related services, engineering and professional services, and materials, commodities, and services contracts. This overview covers MSD’s procurement process from July 1, 2010, through June 30, 2015 (the “study period”).

MSD is a public body corporate and political subdivision of the Commonwealth of Kentucky,<sup>212</sup> and is considered a component unit of the Louisville-Jefferson County Metro Government (Louisville Metro). MSD operates and maintains the sanitary and storm water sewer system for Jefferson County, Kentucky, which is within the Louisville/Jefferson County Metropolitan Statistical Area. MSD is also responsible for flood protection for Louisville Metro. In the remainder of this chapter, and in all succeeding chapters of this study, the Commonwealth of Kentucky is referred to as “Kentucky.”

The Board of the Louisville and Jefferson County Metropolitan Sewer District (Board) governs MSD policies, initiatives, and budget.<sup>213</sup> The Board members are appointed for three-year terms by the Louisville Metro mayor,<sup>214</sup> with consent of the Metro Council. The Board is composed of eight members.<sup>215</sup> The mayor also appoints MSD’s executive director, chief engineer and secretary-treasurer.<sup>216</sup> The executive director oversees the administration of MSD’s procurement process and reports directly to the Board.<sup>217</sup>

## **II. Governing Laws, Regulations and Guidelines**

Table 2.1 outlines the regulations and statutes governing MSD’s purchase of construction, construction-related services, engineering and professional services, and materials, commodities, and services.

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<sup>212</sup> Louisville and Jefferson County Metropolitan Sewer District Strategic Business Plan 2014-2018, Overview, pg. 3 (2014).

<sup>213</sup> Kentucky Revised Statutes, Chapter 76 §.76.010 (Jan. 1, 2015).

<sup>214</sup> Kentucky Revised Statutes, Chapter 67C.139 (1) § 76.030 (1) (July 15, 2002); Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 76 § 76.030 (7) (July 15, 2002).

<sup>215</sup> Kentucky Revised Statutes, Chapter 76 § 76.030 (1) (July 15, 2002).

<sup>216</sup> Kentucky Revised Statutes, Chapter 76 § 76.060 (3) (July 15, 2002).

<sup>217</sup> Louisville and Jefferson County Metropolitan Sewer District Strategic Business Plan 2014-2018, Overview, pg. 3 (2014).



**Table 2.1: Governing Regulations and Statutes**

<b>Federal Laws and Regulations</b>
Brooks Act, 40 U.S.C. Section 1101 Title 40 Code of Federal Regulations Part 33
<b>Commonwealth of Kentucky Revised Statutes</b>
Chapter 45A, Sections 45A.345 –45A.460
<b>Louisville and Jefferson County MSD Procurement Regulations</b>
Louisville and Jefferson County MSD Procurement Regulations Supplier Diversity Contractor Compliance Program

**A. United States Code of Federal Regulations**

**1. Brooks Act, 40 United States Code Section 1101**

The Brooks Act governs the procurement of architectural and engineering services if funded, in whole or in part, by a federal grant.<sup>218</sup> The Brooks Act requires that the procurement process for architecture and engineering services include public advertisement, negotiation, and evaluation procedures based on competence and qualifications, without regard to price.<sup>219</sup>

**2. Title 40 Code of Federal Regulations Part 33**

Recipients of Environmental Protection Agency (EPA) financial assistance through the Clean Water State Revolving Fund, Drinking Water State Revolving Fund, and Brownfield Cleanup Revolving Loan Fund Program must comply with Title 40 CFR Part 33, which requires compliance with EPA’s Disadvantaged Business Enterprise Program. The regulations require EPA recipients to negotiate fair share objectives for MBE and WBE participation on EPA-funded contracts based on demonstrable evidence of their availability.<sup>220</sup>

**3. Title 40 Code of Federal Regulations Part 35.6500**

Title 40 Code of Federal Regulations, Part 35, Section 6500, describes a financial assistance program for agreements funded under the Comprehensive Environmental Response, Compensation & Liability Act of 1980 as amended (CERCLA) superfund monies.

<sup>218</sup> The Brooks Act, 40 U.S. Code § 1102 (2002).

<sup>219</sup> 40 U.S. Code § 1101.

<sup>220</sup> Code of Federal Regulations, TITLE 40 C.F.R. Part 33 § 33.101, *et. seq.* (July 28, 2016).



## **B. Commonwealth of Kentucky Revised Statutes**

The Commonwealth of Kentucky Revised Statutes, Chapter 45A, Sections 45A.345 through Chapter 45A.460, can be adopted by local agencies to govern their procurement. These provisions are called the Local Public Agency Model Procurement Code (Model Code).<sup>221</sup>

## **C. Louisville and Jefferson County MSD Procurement Regulations**

### **1. Louisville and Jefferson County MSD Procurement Regulations**

The Louisville and Jefferson County MSD Procurement Regulations (Regulations) establish procedures for the purchase of construction, construction-related services, engineering and professional services, and materials and commodities.<sup>222</sup> The Regulations authorize the executive director or designee to administer the procurement function of MSD,<sup>223</sup> including soliciting bids and proposals and negotiating and awarding contracts.<sup>224</sup> In the remainder of this chapter, references to the “executive director” shall mean “the executive director or designee.”

### **2. Supplier Diversity Contractor Compliance Program**

The Supplier Diversity Contractor Compliance Program (CCP) is a strategic initiative promulgated to achieve supplier diversity in the award of MSD contracts. The CCP established Minority and Woman Business Enterprise (M/WBE) subcontract goals that apply to the four industries listed in the Request for Proposal (RFP).<sup>225</sup> The industries are construction, construction-related services, engineering and professional services, and commodities and related services contracts. The CCP was in effect during the study period, although it was amended December 1, 2015, to establish interim M/WBE goals that will be modified pending the findings of this Study.<sup>226</sup>

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<sup>221</sup> Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 45A §§ 45A.005 *et seq.* (Jul. 15, 1998).

<sup>222</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2 (December 21, 2015).

<sup>223</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 1 (December 21, 2015).

<sup>224</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 1(A)-(B) (December 21, 2015).

<sup>225</sup> Supplier Diversity Contractor Compliance Program, Revised, May 2009.

<sup>226</sup> MSD Interim Supplier Diversity Program § I(A) (Effective, December 1, 2015).



### **III. Industry Definitions**

**Construction:** all aspects of building, altering, repairing, or improving any public structure or building, or other public improvements of any kind to any public real property. Construction also includes the demolition, destruction, dismantling, or removal of public structures, buildings, and other public improvements and the clearing of land. It does not include the routine operation, routine repair, or routine maintenance of existing structures, buildings, or real property.

**Construction-related Services:** the routine operation, maintenance, repair and/or replacement of existing public facilities, structures, buildings and real property and other services necessary to construction, such as construction management services. Construction-related services do not include services included within the definition of construction or the definition of engineering and professional services.

**Engineering and Professional Services:** services requiring specialized knowledge and skill and formal licensing and/or certification under state law, such as licensed professional engineer, architect, attorney, physician, psychiatrist, psychologist, certified public accountant, registered nurse, or educational specialist. Professional services also include the services of a technician, such as a plumber, electrician, carpenter, or mechanic, or an artist, such as a sculptor, aesthetic painter, or musician. Engineering and professional services do not include the services of architects or engineers providing construction management services rather than professional architect or engineering services.

**Materials, Commodities and Services:** all personal property and/or products including but not limited to equipment, fuel, leases on real property, printing, and insurance and necessarily associated services. Materials and commodities do not include land or any permanent interest in land.

### **IV. Procurement Process Overview**

The Regulations define four methods for the procurement of construction, construction-related services, engineering and professional services, and materials, commodities, and services.<sup>227</sup> The methods include 1) competitive sealed bid, 2) competitive negotiation, 3) non-competitive negotiation, and 4) small purchases. The procurement method selected depends on the industry and the dollar level of the purchase.



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<sup>227</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § Introduction (December 21, 2015).

Small purchases are utilized for procurements valued at \$20,000 and under, and no published advertisement is required.<sup>228</sup> Single purchases valued at \$500 or less can also be procured through MSD’s Purchasing Card Program.<sup>229</sup>

Competitive procurement methods are utilized for purchases that are valued over \$20,000 and require competition.<sup>230</sup> These contracts are solicited using an RFP, Invitation for Bid (IFB), or Request for Qualifications (RFQ). The competitive solicitation method utilized depends on the industry and the circumstances of the procurement. The IFB is the preferred competitive solicitation method for the purchase of construction, construction-related services, and materials, commodities and services contracts. The RFP is the preferred solicitation method for the procurement of engineering and professional services. The RFQ process is utilized to prequalify prospective licensed professionals, consultants, and prospective contractors for supplies, services, and construction.

Non-competitive procurement is authorized for emergency purchases, single source purchases, and for the procurement of goods and services for which KRS 45A.380 or 45A.420 permit the use of non-competitive negotiation, such as services, goods or equipment from units of local government, Kentucky, its political subdivisions or the Government of the United States, services of a licensed professional, insurance coverage, and perishable goods.<sup>231</sup>

## **V. Small Purchases**

MSD utilizes two procurement methods—the Purchasing Card Program and the request for price quotes solicitation method—for small purchases.

### **A. Purchasing Card Program**

The Purchasing Card Program is utilized to procure materials and commodities valued at \$500 and under. MSD employees must be authorized by the executive director to use a purchasing card.<sup>232</sup> The executive director is responsible for establishing procedures for purchasing card usage that allows authorized employees to make small-dollar, non-inventory purchases of materials and supplies. The executive director’s purchasing card expenditures must be reviewed and approved on a monthly basis by the MSD Board chairman or vice chairman.<sup>233</sup>

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<sup>228</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-10(b) (December 21, 2015).

<sup>229</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1 (December 21, 2015).

<sup>230</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B (December 21, 2015).

<sup>231</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2C-1 (December 21, 2015).

<sup>232</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1(c) (December 21, 2015).

<sup>233</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1(d) (December 21, 2015).



## **B. Small Purchases**

The small purchase method is utilized to procure construction, construction-related services, engineering and professional services, and materials, commodities and services contracts valued \$20,000 and under.<sup>234</sup> Price quotations are solicited in accordance with the procedures established by the executive director.<sup>235</sup> Contracts are awarded to the vendor who is most advantageous to MSD and pursuant to the procurement approval authority granted under MSD's Regulations (Appendix A). The executive director authorizes contract award.<sup>236</sup>

## **VI. Competitive Procurement**

The selection of solicitation method —IFB,<sup>237</sup> RFP,<sup>238</sup> or RFQ<sup>239</sup> — is made by the executive director and determined by the industry and circumstances of the procurement.

### **A. Sealed Bids**

IFBs are used to solicit sealed bids for construction services, construction-related services, and materials, commodities, and services.<sup>240</sup> The IFB solicitation method includes 1) public advertisement of the solicitation; 2) evaluation and ranking of the bids; and 3) authorization of award.

#### **1. Advertisement**

IFBs must be advertised at least seven days prior to the bid opening date. The advertisement must appear on MSD's website and in the Louisville Courier Journal or another general-circulation publication. MSD's Supplier Diversity Contractor Compliance Program (CCP Program) requirements must be included in the IFB.<sup>241</sup>

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<sup>234</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1 (December 21, 2015).

<sup>235</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1(b) (December 21, 2015).

<sup>236</sup> *Id.*

<sup>237</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A (December 21, 2015).

<sup>238</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B (December 21, 2015).

<sup>239</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods §§ 2A and 2B (December 21, 2015).

<sup>240</sup> The sealed bidding process shall be used for all procurements except those that qualify under Competitive Negotiations, Non-Competitive Negotiations, or Small Purchases. Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-1 (December 21, 2015).

<sup>241</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-2(a)-(e) (December 21, 2015).



## 2. Bonding Procedure

A bid bond is required to be submitted with construction bids valued in excess of \$25,000.<sup>242</sup> All bidders are required to submit the required bond with the bid. A contract will not be awarded to a bidder who fails to provide a bond when required.<sup>243</sup> The bond must be executed by a surety company that is authorized to conduct business in Kentucky and must be equal to or greater than 7.5% of the total amount of the bid.<sup>244</sup>

Once a bidder is awarded the contract, the bidder must provide a performance bond, payment bond, and maintenance bond to MSD.<sup>245</sup> MSD requires that a performance bond and a payment bond are secured for the full bid price, and that maintenance bonds are secured for an amount deemed sufficient to cover the cost and expense of reconstruction or additional work that may occur.<sup>246</sup> Finally, the contractor and/or relevant surety company will be liable to MSD for all loss, cost, or damage sustained as a result of the contractor's default.<sup>247</sup>

## 3. Evaluation and Award

The contract is awarded to the responsive and responsible bidder with either the lowest price or lowest evaluated price.<sup>248</sup> A bid is deemed responsive if it conforms in all material respects to the solicitation and the submission is timely.<sup>249</sup> A bidder who has the capability to fully perform the contract requirements, and the integrity and reliability to assure good faith performance, is deemed responsible.<sup>250</sup> The executive director is authorized to determine if a bid contains clerical or technical errors, and if it complies with the solicitation specifications, terms, and conditions.<sup>251</sup> The executive director has the discretion to accept incomplete bids if it is deemed to be in MSD's best interest.

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<sup>242</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-1(a) (December 21, 2015).

<sup>243</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 3E-1(b) (December 21, 2015).

<sup>244</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 3E-2(a) (December 21, 2015).

<sup>245</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 3E-3(a) (December 21, 2015).

<sup>246</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 3E-3(b)-(d) (December 21, 2015).

<sup>247</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 3E-1(c) (December 21, 2015).

<sup>248</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-4(b) (December 21, 2015).

<sup>249</sup> Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 45A § 45A.345 (20) (Jul. 15, 1998).

<sup>250</sup> Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 45A § 45A.345 (19) (Jul. 15, 1998).

<sup>251</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-4(c) (December 21, 2015).



Preference is given to bidders who are authorized to operate in Kentucky.<sup>252</sup> Bidders who fail to meet MSD’s CCP Program requirements or the diversity requirements from the funding agency may be deemed non-responsive.<sup>253</sup>

#### **4. Authorization**

Contract awards must be authorized by the executive director or the Board, depending on the contract amount. The executive director is authorized to award contracts valued at \$500,000 and under except that the executive director’s approval is not required for the award of contracts, or for contract amendments, including change orders, below \$100,001. Contracts valued over \$500,000 for construction services, construction-related services, and materials, commodities and services must be awarded by the Board.<sup>254</sup>

##### ***B. Request for Proposals***

Requests for Proposals (RFP) are used to solicit supplies, services, or construction. The RFP solicitation process includes (1) public advertisement of the solicitation; (2) evaluation and ranking of the proposals; and (3) authorization of award.

The executive director must make a written determination that specific conditions exist that make competitive negotiation appropriate.<sup>255</sup> The executive director’s documentation must determine that (1) specifications cannot be made sufficiently specific to permit award based on lowest bid price or lowest evaluated bid price because the specifications include non-standard supplies or services; (2) the available vendors are limited, the time and place of performance cannot be fixed in advance, the price is regulated by law, or a fixed-price contract is not applicable; or (3) prices received during the sealed bid process were unresponsive or unreasonable or identical or appear to have been the result of collusion.<sup>256</sup>

A Procurement Team is created by the executive director in order to develop the RFP, evaluate all submitted proposals, conduct negotiations, and ensure that the RFP conforms to the MSD Supplier Diversity Program.<sup>257</sup> The Procurement Team is composed of the director of the division making

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<sup>252</sup> Preference is administered under the Local Labor Preference and the Reciprocal Resident Business Preference (for more detail please see *Sections IX and X* below). Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-13; § 2A-15 (December 21, 2015).

<sup>253</sup> *Id.*

<sup>254</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 1B-1(a)-(e); Appendix A (December 21, 2015).

<sup>255</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B-1(a) (December 21, 2015).

<sup>256</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B-1(b) (December 21, 2015).

<sup>257</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B-1(c)(ii) (December 21, 2015).



the procurement, and representatives of the Finance Division, the Legal Division, the Supplier Diversity Office, and the Purchasing Department.<sup>258</sup>

## 1. Advertisement

The executive director has the discretion to advertise RFPs. When advertisement is deemed appropriate, the RFP must be advertised at least seven days prior to the bid opening date. The advertisement must be posted on MSD's website, in the Courier Journal, or in another general circulation publication. MSD's Supplier Diversity Program requirements must be included in the RFP.<sup>259</sup>

## 2. Evaluation and Award

The executive director examines the timely submitted proposals to ensure that they conform to the terms and conditions in the RFP. A written determination is made, documenting those proposals received from responsible offerors that constitute a reasonable basis for negotiation.<sup>260</sup> The Procurement Team screens and evaluates proposals based on the proposals' responsiveness to the specifications of the RFP. The scope of the evaluation process is determined by industry and funding source.

Written or oral discussions are to be conducted with all responsible offerors who submit proposals determined in writing to be reasonably susceptible of being selected for award. The contract award is made to the responsible offeror whose proposal is determined in writing to be the most advantageous to MSD based on the evaluation factors set forth in the Request for Proposals.

In the event competitive negotiations are utilized for engineering and/or other professional services, the Procurement Team evaluates the proposals and identifies the responsive, responsible offerors. Interviews or discussions may be held with more than one responsible, responsive offeror to select the best responsive, responsible offeror for further negotiations. If discussions with the first firm selected are not concluded, the Procurement Team will terminate negotiations with that firm and begin negotiations with the next highest-rated firm upon written approval of the executive director.

Upon successful completion of negotiations, the Procurement Team will prepare a written summary of the selection and negotiation process. The summary shall include comments by the Supplier Diversity Program Administrator relative to the successful offeror's proposal for providing Supplier Diversity participation in the contract. The summary shall also include the Procurement Team's recommended selection, which shall be submitted to the executive director.

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<sup>258</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2B-1(c)(ii) (December 21, 2015).

<sup>259</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-2(a)-(e) (December 21, 2015).

<sup>260</sup> *Id.* at § 2B-4(a)-(c).



### 3. Authorization

Contract award must be authorized by the executive director or the Board, depending on the contract amount. The executive director is authorized to award contracts valued at \$500,000 and under, except that the executive director's approval is not required for the award of contracts, or for contract amendments, including change orders, below \$100,001.

#### C. Request for Qualifications

MSD solicits licensed professionals, consultants, and prospective contractors for supplies, services, and construction to prequalify using RFQs. The RFQ solicits the firm's area of expertise, project experience, and complexity and variety of services offered.<sup>261</sup>

Contracts are awarded to prequalified firms in two ways. Firms are selected when the executive director (1) authorizes, through written communication, that non-competitive negotiations may be used to solicit the service; or (2) RFPs are solicited from firms on the prequalified list.<sup>262</sup> Using the second method, negotiations and interviews are held by the Procurement Team. The Procurement Team prepares a written summary of the selection, negotiation process, and recommendation for award.<sup>263</sup>

## VII. Non-Competitive Procurement

Non-competitive procurement is utilized for emergency purchases, sole-source purchases, purchases of real property, and for other goods and services in which KRS 45A permits the use of non-competitive procurement.

#### A. Emergency Purchases

Emergency purchases must be based on a written determination by the executive director regarding the specific procurement.

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<sup>261</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2D-3(a)(iv) (December 21, 2015).

<sup>262</sup> *Id.* at § 2D-3(a)(i)-(ii).

<sup>263</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2D-3(a)(iii) (December 21, 2015).



## **B. Sole-Source Purchases**

A sole-source purchase may be used when there is a single source for the good or service within a reasonable geographical area.<sup>264</sup> Examples of factors that are considered reasonable for a sole-source purchase include:<sup>265</sup>

- Services provided by a public utility holding a monopoly within the geographic region or pursuant to a franchise award
- Goods, services, replacement parts, publications, or subscriptions are available from a single source
- Real property transaction
- Contractual maintenance or service for which the contractor is predetermined due to the special nature of the equipment or facilities owned or leased by MSD
- Good or service consistent with KRS 45A and the MSD Procurement Regulations

Written documentation of the solicitation process must be placed in the procurement file and maintained as a public record.<sup>266</sup>

## **C. Other Non-competitive Procurements**

Other non-competitive procurements are authorized in MSD's Procurement Regulations for:

- Contract for perishable items purchased on a weekly or more frequent basis
- Contract or purchase for expenditures on authorized trips outside MSD's service area
- Purchase for sale of supplies at a reduced price at a savings for MSD
- Services, goods, or equipment from a local government, Kentucky, its political subdivisions, or the United States government
- Services, goods, or equipment under the terms of a Kentucky Price Contract or another local government price contract, and services, goods, or equipment sold to MSD negotiated by the General Services Administration for its current price contracts
- Services, goods, or equipment for which no bids or only one bid was received
- Insurance coverage for group life insurance, group health and accident insurance, good professional liability insurance, workers compensation insurance and unemployment insurance
- Contract for services from a licensed professional, including an engineer, architect, attorney, physician or certified public accountant, or a technician such as a plumber, electrician, carpenter or mechanic, or an artist, except for architects or engineers that

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<sup>264</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2C-1(b) (December 21, 2015).

<sup>265</sup> MSD Procurement Regulations 2C-1(b).

<sup>266</sup> *Id.*



provide construction management services pursuant to 2C-2 of the MSD Procurement Regulations

## **VIII. Supplier Diversity Program**

In 1985, the Board established a supplier diversity initiative to encourage minority- and women-owned businesses to participate in MSD procurement.<sup>267</sup> The initiative was amended in 2004 and 2009. The March 2004 revision, known as the DiverseWorks Contractor Compliance Program, was replaced in 2009 by the Supplier Diversity Contractor Compliance Program (CCP/Program). The CCP was in place during the study period, although it was suspended December 1, 2015, when the Interim Supplier Diversity Policy and Guidelines (Policy) was enacted.<sup>268</sup>

### **A. Supplier Diversity Contractor Compliance Program**

The CCP encouraged and monitored the participation of M/WBEs on MSD's engineering and professional services, construction services, and commodities and related services contracts.<sup>269</sup> MSD actively solicited M/WBEs to participate on its contracts as prime and subcontractors. It was also expected that MSD managers would support the supplier diversity. Their effort was measured in the annual performance evaluations.

The CCP had two staff positions that directed the management and implementation of the Supplier Diversity initiative:<sup>270</sup> These personnel, the Supplier Diversity Manager/Affirmative Action Officer and the Diversity Analyst, worked in conjunction with MSD's executive director to ensure full operation of the CCP.

The Program policies were developed by the Diversity Manager/Affirmative Action Officer, who was responsible for the oversight and management of the initiative.<sup>271</sup> The Diversity Analyst managed daily functions and communication with M/WBEs, MSD staff, and the business community.<sup>272</sup>

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<sup>267</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § History, page 1. (Revised, May 2009).

<sup>268</sup> The CCP was suspended on August 24, 2015, pending the completion of this Disparity Study. MSD Interim Supplier Diversity Policy and Guidelines (Overview, Introduction (A), page 1.

<sup>269</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § History, page 1. (Revised, May 2009).

<sup>270</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Policy Statement, page 1. (Revised, May 2009).

<sup>271</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Supplier Diversity Team, page 4. (Revised, May 2009).

<sup>272</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Policy Statement, page 4. (Revised, May 2009).



## 1. M/WBE Eligibility and Certification Requirements

Eligibility and certification requirements for MBEs and WBEs pursuing contracts with MSD was defined in DiverseWorks, the 2004 program. To be certified as an MBE, a business had to be at least 51 percent owned, operated and independently controlled by at least one African American, Native American, Hispanic American, Asian-Pacific American, or Asian-Indian American.<sup>273</sup> To be certified as a WBE, the business had to be 51 percent woman-owned. All owners of M/WBEs were required to be United States citizens.<sup>274</sup> Under DiverseWorks, MSD processed certifications internally and accepted reciprocal certifications pending approval of the MSD program administration.

In the 2009 amendment, the certification program was amended to eliminate the MSD certification program. Instead, MSD accepted M/WBE certification of other agencies. Only external agencies could certify M/WBEs.<sup>275</sup> Under the CCP, certification as an MBE or a WBE was determined by approval through one of the following agencies: The National Minority Supplier Development Council (NMSDC), the Women's Business Enterprise National Council (WBENC), the Women's Business Council (WBOC) or the United States Small Business Administration 8a (U.S. SBA 8A).<sup>276</sup> Prime contractors were required to utilize M/WBEs that possessed a current certification.

## 2. M/WBE Prime and Subcontract Goals

The CCP established M/WBE subcontract goals for contracts exceeding \$50,000.<sup>277</sup> The MBE goal for the procurement of construction and professional and engineering services was 15% of the prime contract amount. For commodity, material, and services purchases, the MBE subcontract goal was 5%. The construction and professional and engineering services procurement goal was 6% for WBEs. For commodity, material and services purchases, the WBE goal was 3%.<sup>278</sup> To ensure compliance with the CCP, MSD required that all bidders meet the M/WBE goals or submit detailed documentation of the measures undertaken to comply with the goals.<sup>279</sup>

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<sup>273</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, DiverseWorks Contractor Compliance Program § Definitions (E)-(F) (Revised, March 2004).

<sup>274</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, DiverseWorks Contractor Compliance Program § Definitions (E)-(F) (Revised, March 2004).

<sup>275</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Introduction (F), page 5. (Revised, May 2009).

<sup>276</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Definitions (E), page 8. (Revised, May 2009).

<sup>277</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Waiver of Goals (A), page 11. (Revised, May 2009). Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Waiver of Goals (J), page 6. (Revised, May 2009).

<sup>278</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Policy Statement, page 2. (Revised, May 2009).

<sup>279</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Implementation, page 9. (Revised, May 2009).



### 3. Waiver of Goals

Businesses unable to meet the goals were required to request a waiver. The waiver documented the good faith efforts made to secure M/WBE participation, and the requirements for submission were detailed in the CCP. Waiver requests had to be submitted in writing to the Supplier Diversity Department no later than six working days prior to the bid opening.<sup>280</sup> The waiver request would initiate a review of the project's M/WBE participation potential by the Supplier Diversity Department. A bid or proposal that did not meet the goals would be considered non-responsive without the inclusion of the waiver documentation. If the waiver was granted by the executive director, the good faith effort documentation would be disclosed to the MSD Board.<sup>281</sup>

### 4. Prompt Payment Provisions

The prime contractors' pay estimates were required to contain the M/WBE subcontractor billing, the dollar value of each subcontractor agreement, and the subcontract work performed to date. Prime payment was not released until the required monthly reports were provided.<sup>282</sup> The CCP encouraged M/WBEs to negotiate with prime contractors to receive payment for services within 30 days of receipt of an invoice for acceptable work product or service.<sup>283</sup> It also required prime contractors to pay M/WBEs for completed work immediately upon receipt of payment from MSD.<sup>284</sup>

### 5. Tracking and Monitoring M/WBE Utilization

M/WBE utilization was monitored for compliance with M/WBE goals throughout the duration of the contract. In addition to the required M/WBE subcontract information that was submitted with each invoice, the CCP required prime contractors to submit a monthly Equipment and Workforce Utilization report.<sup>285</sup> The Report monitored workforce and equipment utilization throughout the

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<sup>280</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Waiver of Goals (D), page 10. (Revised, May 2009).

<sup>281</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § Waiver of Goals (A), page 10. (Revised, May 2009).

<sup>282</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (6)-(7) (Revised, May 2009).

<sup>283</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (9), page 16. (Revised, May 2009).

<sup>284</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (9), page 16. (Revised, May 2009).

<sup>285</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (6), page 15. (Revised, May 2009).



life of the contract.<sup>286</sup> Failure to submit the report could result in a delay in the payment of the prime contractor's invoice.<sup>287</sup>

## **IX. Local Labor Preference**

MSD has adopted a Local Labor Preference Policy for construction contracts valued \$10 million or greater.<sup>288</sup> The Local Labor Preference is intended to promote employment of individuals domiciled in the Louisville/Jefferson County Metro Government geographic area.<sup>289</sup>

### **A. Local Labor Eligibility**

Individuals who have a primary legal residence within the Kentucky counties of Jefferson, Bullitt, Spencer, Nelson, Shelby, Henry, Oldham, Trimble, and Meade and the Indiana counties of Clark, Floyd, Harrison and Washington qualify as local labor for purposes of the Policy.<sup>290</sup>

### **B. Local Labor Percentage Commitment**

The Local Labor Preference Policy authorizes an evaluated bid process that contains a minimum of two criteria to include both price and local labor preference. MSD requests that each bidder in an evaluated bid process agree to employ a percentage of local labor for all positions created by the project, and be subject to Kentucky's prevailing wages.<sup>291</sup> Each bidder is required to establish its Local Labor Percentage Commitment, which is measured by work hours, including subcontractor commitments.<sup>292</sup> The bidder with the highest Local Labor Percentage Commitment is eligible to receive up to five percent (5%) of the total evaluation points in the cumulative bid process.<sup>293</sup>

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<sup>286</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (6), page 15. (Revised, May 2009).

<sup>287</sup> Louisville and Jefferson County Metropolitan Sewer District Supplier Diversity, Contractor Compliance Program § M/WBE Subcontractor/Subconsultant Participation (8), page 16. (Revised, May 2009).

<sup>288</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15 (December 21, 2015).

<sup>289</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15(b)(i) (December 21, 2015).

<sup>290</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15(a)(ii) (December 21, 2015).

<sup>291</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15 (a)(i) (December 21, 2015).

<sup>292</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15 (a)(iii) (December 21, 2015).

<sup>293</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-15(a)(v) (December 21, 2015).



## **X. Reciprocal Resident Business Preference**

MSD has also adopted a Reciprocal Resident Business Preference Policy as mandated by state law. The law establishes preference for Kentucky resident bidders in the award of contracts with public agencies.<sup>294</sup> The goal of the Reciprocal Resident Business Preference is to equalize competition with other states that also offer the preference to their residents.<sup>295</sup>

### **A. Resident Business Eligibility**

Businesses that are authorized to transact business in Kentucky and have, for a period of at least one (1) year, filed Kentucky corporate income taxes, made payments to the Commonwealth's unemployment insurance fund, and maintained a Kentucky workers' compensation policy are eligible for the Resident Business Preference. A resident business must meet the eligibility criteria on the date that the contract is initially advertised or announced as available for bidding.<sup>296</sup>

### **B. Preference Application**

Prior to a contract award to the lowest responsible and responsive bidder, a resident bidder will be given a preference against a nonresident bidder, as long as the nonresident bidder is registered in any state that gives or requires a preference to bidders from that state.<sup>297</sup> The preference given to the resident bidder will be reciprocally applied on the same terms as the state of the nonresident bidder. Accordingly, the preference given by the public agency will be equal to the preference given in or required by the state of the nonresident bidder.<sup>298</sup>

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<sup>294</sup> Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 45A § 45A.492 (July 15, 2010).

<sup>295</sup> Kentucky Revised statutes, Kentucky Model Procurement Code, Chapter 45A § 45A.492 (July 15, 2010).

<sup>296</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-13(b) (December 21, 2015).

<sup>297</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-13(a) (December 21, 2015).

<sup>298</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2A-13(a) (December 21, 2015).



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# CHAPTER 3: Prime Contractor Utilization Analysis

## I. Introduction

This chapter documents the utilization by Louisville and Jefferson County Metropolitan Sewer District (MSD) of minority- and woman-owned business enterprises (M/WBEs)<sup>299</sup> and non-minority male business enterprises (non-M/WBE) as prime contractors from July 1, 2010, to June 30, 2015 (the “study period”). Purchase orders that MSD awarded during the study period were aggregated into four industries, as follows: (*See Chapter 2 for a more detailed definition of industries.*)

- **Construction:** the process of building, altering, repairing, improving, or demolishing any public structure or building, or other public improvements of any kind to any public real property.
- **Construction-related Services:** routine maintenance of existing structures, buildings, or real property.
- **Engineering and Professional Services:** services requiring specialized knowledge and skill and formal licensing and/or certification under state law, such as licensed professional engineer, architect, attorney, physician, psychiatrist, psychologist, certified public accountant, registered nurse, or educational specialist. Professional services also include the services of a technician, such as a plumber, electrician, carpenter, or mechanic, or an artist, such as a sculptor, aesthetic painter, or musician. Engineering and professional services do not include the services of architects or engineers providing construction management services rather than professional architect or engineering services.
- **Materials, Commodities and Services:** all personal property, including leases on real property, printing, and insurance<sup>300</sup> and other necessarily associated contractual services.

MSD’s purchase orders were analyzed at three thresholds: 1) all purchase orders, 2) informal purchase orders valued \$10,001 to \$20,000, defined in accordance with MSD’s Procurement Regulations as small purchases, and 3) formal purchase orders, which are defined by the Procurement Regulations as purchase orders valued over \$20,000. A threshold was set for each industry to exclude outliers, as detailed below in *Section III: Thresholds for Analysis*.

The analysis of the utilization data is also disaggregated by ethnicity and gender. The seven ethnic and gender groups are listed in Table 3.1.

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<sup>299</sup> Women Business Enterprises is also referred to as Caucasian females.

<sup>300</sup> Kentucky Model Procurement Code 45A.345 (26).



**Table 3.1: Business Ethnic and Gender Groups**

<b>Ethnicity and Gender Category</b>	<b>Definition</b>
African Americans	Businesses owned by male and female African Americans
Asian-Pacific Americans	Businesses owned by male and female Asian-Pacific Americans
Asian-Indian Americans	Businesses owned by male and female Asian-Indian Americans
Hispanic Americans	Businesses owned by male and female Hispanic Americans
Native Americans	Businesses owned by male and female Native Americans
Caucasian Females	Businesses owned by Caucasian females
Non-minority Males	Businesses owned by Caucasian males <sup>301</sup>

## ***II. Prime Contractor Purchase Order Data Sources***

The prime contractor data consist of purchase orders issued during the July 1, 2010, to June 30, 2015, study period. The datasets were extracted from MSD’s Systems, Applications, and Products (SAP) database. Each purchase order was classified into one of the four industries, and the assignment of industry classifications was reviewed and approved by MSD.

Research was conducted to verify the ethnicity and gender of each prime contractor. The prime contractor’s name was cross-referenced with certification lists, chambers of commerce directories, and trade organization membership directories. Prime contractors’ websites were also reviewed for ethnicity and gender of the business owner. Prime contractors whose ethnicity and gender could not be verified through a published source were contacted by telephone as part of an ethnicity and gender survey. Upon completion of the ethnicity and gender research, the purchase order records were cleaned, and the prime contractor utilization analysis was conducted.



<sup>301</sup> This group also includes businesses that could not be identified as minority or Caucasian female-owned. See *Section II: Prime Contractor Purchase Order Data Sources* for the methodology employed to identify the ethnicity and gender of MSD’s utilized prime contractors.

### **III. Thresholds for Analysis**

#### **A. Informal Threshold**

The informal threshold includes small purchases valued \$10,001 to \$20,000,<sup>302</sup> as defined in MSD’s Procurement Regulations. The informal threshold for each industry are listed in Table 3.2.

**Table 3.2: Small Purchase Order Thresholds by Industry**

<b>Industry</b>	<b>Informal Purchase Order Threshold</b>
Construction	\$10,001 to \$20,000
Construction-related Services	\$10,001 to \$20,000
Engineering and Professional Services	\$10,001 to \$20,000
Materials, Commodities and Services	\$10,001 to \$20,000

#### **B. Formal Threshold**

The formal threshold, as defined in MSD’s Procurement Regulations, requires the inclusion of purchase orders greater than \$20,000. The formal thresholds were capped to remove purchase orders that constituted outliers, from each industry using a statistical analysis.

Outliers are data points that should be excluded from the analysis because they obscure the measures of central tendency of the data. In other words, very large data points distort the distribution of data and, in turn, the disparity analysis. Including the outliers in the analysis does not allow for a mathematically sound analysis because of their tendency to distort. The upper bound that created a cut-off point for purchase orders was calculated using Chebyshev’s theorem. Using three standard deviations as the benchmark, approximately 89% of the purchase orders would fall within this range. Thus, any dollar value above the 89<sup>th</sup> percentile was defined as an outlier and excluded from the analysis.

Limiting the formal purchase order analysis to those valued at and below the 89<sup>th</sup> percentile also ensures that the available businesses enumerated in the availability analysis possess the capacity to provide the goods and services subject to the disparity analysis. The formal purchase order threshold derived for each industry is listed in Table 3.3.



<sup>302</sup> Louisville and Jefferson County Metropolitan Sewer District Procurement Regulations, Procurement Methods § 2E-1 (December 21, 2015).

**Table 3.3: Formal Purchase Order Thresholds by Industry**

<b>Industry</b>	<b>Formal Purchase Order Threshold</b>
Construction	\$20,001 to \$1,710,000
Construction-related Services	\$20,001 to \$500,000
Engineering and Professional Services	\$20,001 to \$460,000
Materials, Commodities and Services	\$20,001 to \$350,000

#### ***IV. Prime Contractor Utilization***

This section presents prime contractor utilization by industry, ethnicity, and gender. The information is presented at three threshold levels: 1) all prime purchase orders, 2) the informal threshold, as defined by MSD’s Procurement Regulations, and 3) the formal threshold, as determined by the statistical analysis to exclude outliers for each industry.

##### ***A. All Prime Purchase Orders***

As shown in Table 3.4, MSD issued 2,342 purchase orders during the July 1, 2010, to June 30, 2015, study period. The 2,342 purchase orders included 593 for construction, 406 for construction-related services, 597 for engineering and professional services, and 746 for materials, commodities and services.

The payments made by MSD during the study period totaled \$660,792,360 for all 2,342 prime purchase orders. Payments included \$429,527,279 for construction, \$59,860,817 for construction-related services, \$105,579,670 for engineering and professional services, and \$65,824,594 for materials, commodities and services.



**Table 3.4: Total Prime Purchase Orders and Dollars Expended:  
All Industries, July 1, 2010, to June 30, 2015**

Industry	Total Number of Purchase Orders	Total Dollars Expended
Construction	593	\$429,527,279
Construction-related Services	406	\$59,860,817
Engineering and Professional Services	597	\$105,579,670
Materials, Commodities and Services	746	\$65,824,594
<b>Total Expenditures</b>	<b>2,342</b>	<b>\$660,792,360</b>

Table 3.5 lists the distribution of all purchase orders awarded by dollar value. It is notable that non-minority males received the majority of the purchase orders.

**Table 3.5: Distribution of Total Prime Purchase Orders by Dollar Amount  
All Industries, July 1, 2010, to June 30, 2015**

Size	Non-minority				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$10,000 - \$19,999	73	3.12%	599	25.58%	2	0.09%	82	3.50%	756	32.28%
\$20,000 - \$49,999	68	2.90%	504	21.52%	13	0.56%	68	2.90%	653	27.88%
\$50,000 - \$99,999	45	1.92%	212	9.05%	7	0.30%	27	1.15%	291	12.43%
\$100,000 - \$249,999	22	0.94%	243	10.38%	3	0.13%	19	0.81%	287	12.25%
\$250,000 - \$499,999	16	0.68%	140	5.98%	2	0.09%	11	0.47%	169	7.22%
\$500,000 - \$999,999	6	0.26%	79	3.37%	0	0.00%	2	0.09%	87	3.71%
\$1,000,000 - \$2,999,999	2	0.09%	67	2.86%	0	0.00%	0	0.00%	69	2.95%
\$3,000,000 and greater	1	0.04%	29	1.24%	0	0.00%	0	0.00%	30	1.28%
<b>Total</b>	<b>233</b>	<b>9.95%</b>	<b>1,873</b>	<b>79.97%</b>	<b>27</b>	<b>1.15%</b>	<b>209</b>	<b>8.92%</b>	<b>2,342</b>	<b>100.00%</b>

### 1. Highly Used Construction Prime Contractors

As shown in Table 3.6, MSD's 593 construction prime purchase orders were received by 89 unique businesses. But in each industry studied a small group of contractors received 70% or more of the dollars awarded. In construction, for example, just six contractors received 70% of dollars spent. In construction-related services, 15 businesses received 70%. In engineering and professional services, 17 businesses out of 164 received 71% of dollars spent. And in materials, commodities and services, 25 businesses received 70% of dollars spent.



**Table 3.6: Construction Prime Purchase Orders**

Total Prime Purchase Orders	593
Total Utilized Businesses	89
<b>Total Expenditures</b>	<b>\$429,527,279</b>

Table 3.7 presents the distribution of MSD’s construction prime purchase orders by the number of businesses. Six of the 89 businesses received \$300,031,198, or 70% of the total dollars. The findings illustrate that a small group of prime contractors received the majority of construction prime purchase order dollars spent by MSD.

**Table 3.7: Construction Prime Purchase Orders Distributed by Number of Businesses**

Businesses	Total Dollars	Percent of Dollars <sup>303</sup>	Number of Purchase Orders	Percent of Purchase Orders <sup>304</sup>
6 Highly Used Businesses	\$300,031,198	70%	50	8%
83 Businesses	\$129,496,081	30%	543	92%
<b>89 Total Businesses</b>	<b>\$429,527,279</b>	<b>100%</b>	<b>593</b>	<b>100%</b>

Table 3.8 presents the ethnicity and gender of the most highly used construction prime contractors, who received approximately 54% of the construction prime purchase order dollars. All four of the most highly used prime contractors were non-minority male-owned businesses. The purchase orders received by these businesses ranged from \$22,306 to \$47,906,892.

**Table 3.8: Top Four Highly Used Construction Prime Contractors**

Ethnicity/ Gender <sup>305</sup>	Total Dollars	Percent of Dollars	Number of Purchase Orders	Percent of Purchase Orders
Non-minority Males	\$231,541,538	53.91%	31	5.23%

## 2. Highly Used Construction-related Services Prime Contractors

As shown in Table 3.9, MSD’s 406 construction-related services prime purchase orders were received by 109 unique businesses.

**Table 3.9: Construction-related Services Prime Purchase Orders**

Total Prime Purchase Orders	406
Total Utilized Businesses	109
<b>Total Expenditures</b>	<b>\$59,860,817</b>

<sup>303</sup> Percentages are rounded to the nearest whole number.

<sup>304</sup> Percentages are rounded to the nearest whole number.

<sup>305</sup> African Americans, Asian-Pacific Americans, Asian-Indian Americans, Hispanic Americans, Native Americans, and Caucasian females were omitted from the table because they were not highly used.



Table 3.10 presents the distribution of MSD construction-related services prime purchase orders by the number of businesses. Fifteen of the 109 businesses received \$42,195,566, or 70% of the total dollars. The findings illustrate that a small group of prime contractors received the majority of construction-related services prime purchase order dollars spent by MSD.

**Table 3.10: Construction-related Services Prime Purchase Orders Distributed by Number of Businesses**

<b>Businesses</b>	<b>Total Dollars</b>	<b>Percent of Dollars<sup>306</sup></b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders<sup>307</sup></b>
15 Highly Used Businesses	\$42,195,566	70%	138	34%
94 Businesses	\$17,665,252	30%	268	66%
<b>109 Total Businesses</b>	<b>\$59,860,817</b>	<b>100%</b>	<b>406</b>	<b>100%</b>

Table 3.11 presents the ethnicity and gender of the most highly used construction-related services prime contractors, who received approximately 50% of construction-related services prime purchase order dollars. The six most highly used prime contractors were non-minority male-owned businesses. The purchase orders received by these businesses ranged from \$45,373 to \$1,500,000.

**Table 3.11: Top Seven Highly Used Construction-related Services Prime Contractors**

<b>Ethnicity/ Gender<sup>308</sup></b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>
Non-minority Males	\$29,631,514	49.50%	51	12.56%

### **3. Highly Used Engineering and Professional Services Prime Contractors**

As shown in Table 3.12, MSD’s 597 engineering and professional services prime purchase orders were received by 164 unique businesses.

**Table 3.12: Engineering and Professional Services Prime Purchase Orders**

Total Prime Purchase Orders	597
Total Utilized Businesses	164
<b>Total Expenditures</b>	<b>\$105,579,670</b>



<sup>306</sup> Percentages are rounded to the nearest whole number.

<sup>307</sup> Percentages are rounded to the nearest whole number.

<sup>308</sup> African Americans, Asian-Pacific Americans, Asian-Indian Americans, Hispanic Americans, Native Americans, and Caucasian females were omitted from the table because they were not highly used.

Table 3.13 presents the distribution of MSD’s engineering and professional services prime purchase orders by the number of businesses. Seventeen of the 164 businesses received \$74,573,144, or 71% of the total dollars. The findings illustrate that a small group of prime contractors received the majority of engineering and professional services prime purchase order dollars spent by MSD.

**Table 3.13: Engineering and Professional Services Prime Purchase Orders Distributed by Number of Businesses**

<b>Businesses</b>	<b>Total Dollars</b>	<b>Percent of Dollars<sup>309</sup></b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders<sup>310</sup></b>
17 Highly Used Businesses	\$74,573,144	71%	249	42%
147 Businesses	\$31,006,526	29%	348	58%
<b>164 Total Businesses</b>	<b>\$105,579,670</b>	<b>100%</b>	<b>597</b>	<b>100%</b>

Table 3.14 presents the ethnicity and gender of the most highly used engineering and professional services prime contractors, who received approximately 48% of the engineering and professional services prime purchase order dollars. The seven most highly used prime contractors were non-minority male-owned businesses. The purchase orders received by these businesses ranged from \$10,576 to \$3,444,710.

**Table 3.14: Top Seven Highly Used Engineering and Professional Services Prime Contractors**

<b>Ethnicity/ Gender<sup>311</sup></b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>
Non-minority Males	\$51,157,570	48.45%	163	27.30%

#### **4. Highly Used Materials, Commodities and Services Prime Contractors**

As shown in Table 3.15, MSD’s 746 materials, commodities and services prime purchase orders were received by 254 unique businesses.

**Table 3.15: Materials, Commodities and Services Prime Purchase Orders**

Total Prime Purchase Orders	746
Total Utilized Businesses	254
<b>Total Expenditures</b>	<b>\$65,824,594</b>



<sup>309</sup> Percentages are rounded to the nearest whole number.

<sup>310</sup> Percentages are rounded to the nearest whole number.

<sup>311</sup> African Americans, Asian-Pacific Americans, Asian-Indian Americans, Hispanic Americans, Native Americans, and Caucasian females were omitted from the table because they were not highly used.

Table 3.16 presents the distribution of MSD’s materials, commodities and services prime purchase orders by the number of businesses. Twenty-five of the 254 businesses received \$46,018,576, or 70% of the total dollars. The findings illustrate that a small group of prime contractors received the majority of materials, commodities and services prime purchase order dollars spent by MSD.

**Table 3.16: Materials, Commodities and Services Prime Purchase Orders Distributed by Number of Businesses**

<b>Businesses</b>	<b>Total Dollars</b>	<b>Percent of Dollars<sup>312</sup></b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders<sup>313</sup></b>
25 Highly Used Businesses	\$46,018,576	70%	219	29%
229 Businesses	\$19,806,018	30%	527	71%
<b>254 Total Businesses</b>	<b>\$65,824,594</b>	<b>100%</b>	<b>746</b>	<b>100%</b>

Table 3.17 presents the ethnicity and gender of the most highly used materials, commodities and services prime contractors, who received approximately 51% of the materials, commodities and services prime purchase order dollars. The 10 most highly used prime contractors were non-minority male-owned businesses. The purchase orders received by these businesses ranged from \$11,620 to \$4,262,037.

**Table 3.17: Top 10 Highly Used Materials, Commodities and Services Prime Contractors**

<b>Ethnicity/ Gender<sup>314</sup></b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>
Non-minority Males	\$33,432,905	50.79%	53	7.10%



<sup>312</sup> Percentages are rounded to the nearest whole number.

<sup>313</sup> Percentages are rounded to the nearest whole number.

<sup>314</sup> African Americans, Asian-Pacific Americans, Asian-Indian Americans, Hispanic Americans, Native Americans, and Caucasian females were omitted from the table because they were not highly used.

## **B. All Prime Purchase Orders, by Industry**

### **1. Construction Prime Purchase Order Utilization: All Purchase Orders**

Table 3.18 summarizes all dollars expended by MSD on construction prime purchase orders. MBEs received 1.00% of the prime construction purchase order dollars; Caucasian female-owned business (WBEs) received 3.64%; and non-minority male-owned businesses (non-M/WBE) received 95.36%.

*African Americans* received 67 or 11.30% of all construction prime purchase orders awarded during the study period, representing \$2,603,966 or 0.61% of the construction prime purchase order dollars.

*Asian-Pacific Americans* received 19 or 3.20% of all construction prime purchase orders awarded during the study period, representing \$418,108 or 0.10% of the construction prime purchase order dollars.

*Asian-Indian Americans* received 0 or 0.00% of all construction prime purchase orders awarded during the study period, representing \$0 or 0.00% of the construction prime purchase order dollars.

*Hispanic Americans* received 5 or 0.84% of all construction prime purchase orders awarded during the study period, representing \$938,433 or 0.22% of the construction prime purchase order dollars.

*Native Americans* received 10 or 1.69% of all construction prime purchase orders awarded during the study period, representing \$337,724 or 0.08% of the construction prime purchase order dollars.

*Caucasian Females* received 94 or 15.85% of all construction prime purchase orders awarded during the study period, representing \$15,651,177 or 3.64% of the construction prime purchase order dollars.

*Non-minority Males* received 398 or 67.12% of all construction prime purchase orders awarded during the study period, representing \$409,577,872 or 95.36% of the construction prime purchase order dollars.



**Table 3.18: Construction Prime Purchase Order Utilization:  
All Purchase Orders, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	67	11.30%	\$2,603,966	0.61%
Asian-Pacific Americans	19	3.20%	\$418,108	0.10%
Asian-Indian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	5	0.84%	\$938,433	0.22%
Native Americans	10	1.69%	\$337,724	0.08%
Caucasian Females	94	15.85%	\$15,651,177	3.64%
Non-minority Males	398	67.12%	\$409,577,872	95.36%
<b>TOTAL</b>	<b>593</b>	<b>100.00%</b>	<b>\$429,527,279</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	1	0.17%	\$40,170	0.01%
African American Males	66	11.13%	\$2,563,796	0.60%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	19	3.20%	\$418,108	0.10%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	5	0.84%	\$938,433	0.22%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	10	1.69%	\$337,724	0.08%
Caucasian Females	94	15.85%	\$15,651,177	3.64%
Non-minority Males	398	67.12%	\$409,577,872	95.36%
<b>TOTAL</b>	<b>593</b>	<b>100.00%</b>	<b>\$429,527,279</b>	<b>100.00%</b>



## 2. Construction-related Services Prime Purchase Order Utilization: All Purchase Orders

Table 3.19 summarizes all dollars expended by MSD on construction-related services prime purchase orders. MBEs received 8.58% of the construction-related services prime purchase order dollars; WBEs received 5.71%; and non-M/WBEs received 85.71%.

*African Americans* received 27 or 6.65% of all construction-related services prime purchase orders awarded during the study period, representing \$1,900,027 or 3.17% of the construction-related services prime purchase order dollars.

*Asian-Pacific Americans* received 5 or 1.23% of all construction-related services prime purchase orders awarded during the study period, representing \$281,632 or 0.47% of the construction-related services prime purchase order dollars.

*Asian-Indian Americans* received 3 or 0.74% of all construction-related services prime purchase orders awarded during the study period, representing \$834,875 or 1.39% of the construction-related services prime purchase order dollars.

*Hispanic Americans* received 2 or 0.49% of all construction-related services prime purchase orders awarded during the study period, representing \$578,900 or 0.97% of the construction-related services prime purchase order dollars.

*Native Americans* received 16 or 3.94% of all construction-related services prime purchase orders awarded during the study period, representing \$1,539,056 or 2.57% of the construction-related services prime purchase order dollars.

*Caucasian Females* received 53 or 13.05% of all construction-related services prime purchase orders awarded during the study period, representing \$3,417,280 or 5.71% of the construction-related services prime purchase order dollars.

*Non-minority Males* received 300 or 73.89% of all construction-related services prime purchase orders awarded during the study period, representing \$51,309,048 or 85.71% of the construction-related services prime purchase order dollars.



**Table 3.19: Construction-related Services Prime Purchase Order Utilization:  
All Purchase Orders, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	27	6.65%	\$1,900,027	3.17%
Asian-Pacific Americans	5	1.23%	\$281,632	0.47%
Asian-Indian Americans	3	0.74%	\$834,875	1.39%
Hispanic Americans	2	0.49%	\$578,900	0.97%
Native Americans	16	3.94%	\$1,539,056	2.57%
Caucasian Females	53	13.05%	\$3,417,280	5.71%
Non-minority Males	300	73.89%	\$51,309,048	85.71%
<b>TOTAL</b>	<b>406</b>	<b>100.00%</b>	<b>\$59,860,817</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	17	4.19%	\$1,636,513	2.73%
African American Males	10	2.46%	\$263,513	0.44%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	5	1.23%	\$281,632	0.47%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	3	0.74%	\$834,875	1.39%
Hispanic American Females	1	0.25%	\$180,000	0.30%
Hispanic American Males	1	0.25%	\$398,900	0.67%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	16	3.94%	\$1,539,056	2.57%
Caucasian Females	53	13.05%	\$3,417,280	5.71%
Non-minority Males	300	73.89%	\$51,309,048	85.71%
<b>TOTAL</b>	<b>406</b>	<b>100.00%</b>	<b>\$59,860,817</b>	<b>100.00%</b>



### 3. Engineering and Professional Services Prime Purchase Order Utilization: All Purchase Orders

Table 3.20 summarizes all dollars expended by MSD on engineering and professional services prime purchase orders. MBEs received 4.55% of the engineering and professional services prime purchase order dollars; WBEs received 6.37%; and non-M/WBEs received 89.08%.

*African Americans* received 14 or 2.35% of all engineering and professional services prime purchase orders awarded during the study period, representing \$1,567,051 or 1.48% of the engineering and professional services prime purchase order dollars.

*Asian-Pacific Americans* received 2 or 0.34% of all engineering and professional services prime purchase orders awarded during the study period, representing \$34,125 or 0.03% of the engineering and professional services prime purchase order dollars.

*Asian-Indian Americans* received 12 or 2.01% of all engineering and professional services prime purchase orders awarded during the study period, representing \$1,924,995 or 1.82% of the engineering and professional services prime purchase order dollars.

*Hispanic Americans* received 14 or 2.35% of all engineering and professional services prime purchase orders awarded during the study period, representing \$1,280,239 or 1.21% of the engineering and professional services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of all engineering and professional services prime purchase orders awarded during the study period, representing \$0 or 0.00% of the engineering and professional services prime purchase order dollars.

*Caucasian Females* received 69 or 11.56% of all engineering and professional services prime purchase orders awarded during the study period, representing \$6,725,602 or 6.37% of the engineering and professional services prime purchase order dollars.

*Non-minority Males* received 486 or 81.41% of all engineering and professional services prime purchase orders awarded during the study period, representing \$94,047,659 or 89.08% of the engineering and professional services prime purchase order dollars.



**Table 3.20: Engineering and Professional Services Prime Purchase Order Utilization:  
All Purchase Orders, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	14	2.35%	\$1,567,051	1.48%
Asian-Pacific Americans	2	0.34%	\$34,125	0.03%
Asian-Indian Americans	12	2.01%	\$1,924,995	1.82%
Hispanic Americans	14	2.35%	\$1,280,239	1.21%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	69	11.56%	\$6,725,602	6.37%
Non-minority Males	486	81.41%	\$94,047,659	89.08%
<b>TOTAL</b>	<b>597</b>	<b>100.00%</b>	<b>\$105,579,670</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	2	0.34%	\$90,651	0.09%
African American Males	12	2.01%	\$1,476,400	1.40%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	2	0.34%	\$34,125	0.03%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	12	2.01%	\$1,924,995	1.82%
Hispanic American Females	3	0.50%	\$92,000	0.09%
Hispanic American Males	11	1.84%	\$1,188,239	1.13%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	69	11.56%	\$6,725,602	6.37%
Non-minority Males	486	81.41%	\$94,047,659	89.08%
<b>TOTAL</b>	<b>597</b>	<b>100.00%</b>	<b>\$105,579,670</b>	<b>100.00%</b>



#### **4. Materials, Commodities and Services Prime Purchase Order Utilization: All Purchase Orders**

Table 3.21 summarizes all dollars expended by MSD on materials, commodities and services prime purchase orders. MBEs received 1.94% of the materials, commodities and services prime purchase order dollars; WBEs received 1.48%; and non-M/WBEs received 96.58%.

*African Americans* received 11 or 1.47% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$205,670 or 0.31% of the materials, commodities and services prime purchase order dollars.

*Asian-Pacific Americans* received 16 or 2.14% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$664,722 or 1.01% of the materials, commodities and services prime purchase order dollars.

*Asian-Indian Americans* received 3 or 0.40% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$220,781 or 0.34% of the materials, commodities and services prime purchase order dollars.

*Hispanic Americans* received 10 or 1.34% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$185,880 or 0.28% of the materials, commodities and services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$0 or 0.00% of the materials, commodities and services prime purchase order dollars.

*Caucasian Females* received 17 or 2.28% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$972,403 or 1.48% of the materials, commodities and services prime purchase order dollars.

*Non-minority Males* received 689 or 92.36% of all materials, commodities and services prime purchase orders awarded during the study period, representing \$63,575,137 or 96.58% of the materials, commodities and services prime purchase order dollars.



**Table 3.21: Materials, Commodities and Services Prime Purchase Order Utilization:  
All Purchase Orders, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	11	1.47%	\$205,670	0.31%
Asian-Pacific Americans	16	2.14%	\$664,722	1.01%
Asian-Indian Americans	3	0.40%	\$220,781	0.34%
Hispanic Americans	10	1.34%	\$185,880	0.28%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	17	2.28%	\$972,403	1.48%
Non-minority Males	689	92.36%	\$63,575,137	96.58%
<b>TOTAL</b>	<b>746</b>	<b>100.00%</b>	<b>\$65,824,594</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	3	0.40%	\$76,412	0.12%
African American Males	8	1.07%	\$129,258	0.20%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	16	2.14%	\$664,722	1.01%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	3	0.40%	\$220,781	0.34%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	10	1.34%	\$185,880	0.28%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	17	2.28%	\$972,403	1.48%
Non-minority Males	689	92.36%	\$63,575,137	96.58%
<b>TOTAL</b>	<b>746</b>	<b>100.00%</b>	<b>\$65,824,594</b>	<b>100.00%</b>



## **C. Informal Prime Purchase Orders, by Industry**

### **1. Construction Prime Purchase Order Utilization: Purchase Orders Valued \$10,001 to \$20,000**

Table 3.22 summarizes all dollars expended by MSD on construction prime purchase orders valued \$10,001 to \$20,000. MBEs received 27.89% of the construction prime purchase order dollars; WBEs received 3.43%; and non-M/WBEs received 68.68%.

*African Americans* received 22 or 13.75% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$289,458 or 11.96% of the construction prime purchase order dollars.

*Asian-Pacific Americans* received 15 or 9.38% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$237,194 or 9.80% of the construction prime purchase order dollars.

*Asian-Indian Americans* received 0 or 0.00% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the construction prime purchase order dollars.

*Hispanic Americans* received 1 or 0.63% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$17,500 or 0.72% of the construction prime purchase order dollars.

*Native Americans* received 8 or 5.00% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$131,081 or 5.41% of the construction prime purchase order dollars.

*Caucasian Females* received 6 or 3.75% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$83,160 or 3.43% of the construction prime purchase order dollars.

*Non-minority Males* received 108 or 67.50% of the construction prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$1,662,839 or 68.68% of the construction prime purchase order dollars.



**Table 3.22: Construction Prime Purchase Order Utilization:  
Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	22	13.75%	\$289,458	11.96%
Asian-Pacific Americans	15	9.38%	\$237,194	9.80%
Asian-Indian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	1	0.63%	\$17,500	0.72%
Native Americans	8	5.00%	\$131,081	5.41%
Caucasian Females	6	3.75%	\$83,160	3.43%
Non-minority Males	108	67.50%	\$1,662,839	68.68%
<b>TOTAL</b>	<b>160</b>	<b>100.00%</b>	<b>\$2,421,232</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	0	0.00%	\$0	0.00%
African American Males	22	13.75%	\$289,458	11.96%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	15	9.38%	\$237,194	9.80%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	1	0.63%	\$17,500	0.72%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	8	5.00%	\$131,081	5.41%
Caucasian Females	6	3.75%	\$83,160	3.43%
Non-minority Males	108	67.50%	\$1,662,839	68.68%
<b>TOTAL</b>	<b>160</b>	<b>100.00%</b>	<b>\$2,421,232</b>	<b>100.00%</b>



## 2. Construction-related Services Prime Purchase Order Utilization: Purchase Orders Valued \$10,001 to \$20,000

Table 3.23 summarizes all dollars expended by MSD on construction-related services prime purchase orders valued \$10,001 to \$20,000. MBEs received 10.82% of all construction-related services prime purchase order dollars; WBEs received 27.85%; and non-M/WBEs received 61.33%.

*African Americans* received 5 or 3.76% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$68,232 or 3.52% of the construction-related services prime purchase order dollars.

*Asian-Pacific Americans* received 0 or 0.00% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the construction-related services prime purchase order dollars.

*Asian-Indian Americans* received 0 or 0.00% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the construction-related services prime purchase order dollars.

*Hispanic Americans* received 0 or 0.00% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the construction-related services prime purchase order dollars.

*Native Americans* received 9 or 6.77% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$141,588 or 7.30% of the construction-related services prime purchase order dollars.

*Caucasian Females* received 37 or 27.82% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$539,769 or 27.85% of the construction-related services prime purchase order dollars.

*Non-minority Males* received 82 or 61.65% of the construction-related services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$1,188,709 or 61.33% of the construction-related services prime purchase order dollars.



**Table 3.23: Construction-related Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	5	3.76%	\$68,232	3.52%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Asian-Indian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	0	0.00%	\$0	0.00%
Native Americans	9	6.77%	\$141,588	7.30%
Caucasian Females	37	27.82%	\$539,769	27.85%
Non-minority Males	82	61.65%	\$1,188,709	61.33%
<b>TOTAL</b>	<b>133</b>	<b>100.00%</b>	<b>\$1,938,297</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	1	0.75%	\$10,016	0.52%
African American Males	4	3.01%	\$58,216	3.00%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	9	6.77%	\$141,588	7.30%
Caucasian Females	37	27.82%	\$539,769	27.85%
Non-minority Males	82	61.65%	\$1,188,709	61.33%
<b>TOTAL</b>	<b>133</b>	<b>100.00%</b>	<b>\$1,938,297</b>	<b>100.00%</b>



**3. Engineering and Professional Services Prime Purchase Order  
Utilization: Purchase Orders Valued \$10,001 to \$20,000**

Table 3.24 summarizes all dollars expended by MSD on engineering and professional services prime purchase orders valued \$10,001 to \$20,000. MBEs received 8.76% of the engineering and professional services prime purchase order dollars; WBEs received 18.51%; and non-M/WBEs received 72.73%.

*African Americans* received 2 or 1.60% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$29,640 or 1.61% of the engineering and professional services prime purchase order dollars.

*Asian-Pacific Americans* received 1 or 0.80% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$10,720 or 0.58% of the engineering and professional services prime purchase order dollars.

*Asian-Indian Americans* received 4 or 3.20% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$53,418 or 2.91% of the engineering and professional services prime purchase order dollars.

*Hispanic Americans* received 4 or 3.20% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$67,160 or 3.66% of the engineering and professional services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the engineering and professional services prime purchase order dollars.

*Caucasian Females* received 23 or 18.40% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$339,976 or 18.51% of the engineering and professional services prime purchase order dollars.

*Non-minority Males* received 91 or 72.80% of the engineering and professional services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$1,336,014 or 72.73% of the engineering and professional services prime purchase order dollars.



**Table 3.24: Engineering and Professional Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	2	1.60%	\$29,640	1.61%
Asian-Pacific Americans	1	0.80%	\$10,720	0.58%
Asian-Indian Americans	4	3.20%	\$53,418	2.91%
Hispanic Americans	4	3.20%	\$67,160	3.66%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	23	18.40%	\$339,976	18.51%
Non-minority Males	91	72.80%	\$1,336,014	72.73%
<b>TOTAL</b>	<b>125</b>	<b>100.00%</b>	<b>\$1,836,928</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	0	0.00%	\$0	0.00%
African American Males	2	1.60%	\$29,640	1.61%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	1	0.80%	\$10,720	0.58%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	4	3.20%	\$53,418	2.91%
Hispanic American Females	1	0.80%	\$15,000	0.82%
Hispanic American Males	3	2.40%	\$52,160	2.84%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	23	18.40%	\$339,976	18.51%
Non-minority Males	91	72.80%	\$1,336,014	72.73%
<b>TOTAL</b>	<b>125</b>	<b>100.00%</b>	<b>\$1,836,928</b>	<b>100.00%</b>



**4. Materials, Commodities and Services Prime Purchase Order  
Utilization: Purchase Orders Valued \$10,001 to \$20,000**

Table 3.25 summarizes all dollars expended by MSD on materials, commodities and services prime purchase orders valued \$10,001 to \$20,000. MBEs received 6.46% of the materials, commodities and services prime purchase order dollars; WBEs received 2.85%; and non-M/WBEs received 90.69%.

*African Americans* received 6 or 1.69% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$79,461 or 1.54% of the materials, commodities and services prime purchase order dollars.

*Asian-Pacific Americans* received 6 or 1.69% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$92,273 or 1.79% of the materials, commodities and services prime purchase order dollars.

*Asian-Indian Americans* received 0 or 0.00% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the materials, commodities and services prime purchase order dollars.

*Hispanic Americans* received 9 or 2.53% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$160,960 or 3.12% of the materials, commodities and services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$0 or 0.00% of the materials, commodities and services prime purchase order dollars.

*Caucasian Females* received 9 or 2.53% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$146,945 or 2.85% of the materials, commodities and services prime purchase order dollars.

*Non-minority Males* received 326 or 91.57% of the materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 awarded during the study period, representing \$4,671,582 or 90.69% of the materials, commodities and services prime purchase order dollars.



**Table 3.25: Materials, Commodities and Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	6	1.69%	\$79,461	1.54%
Asian-Pacific Americans	6	1.69%	\$92,273	1.79%
Asian-Indian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	9	2.53%	\$160,960	3.12%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	9	2.53%	\$146,945	2.85%
Non-minority Males	326	91.57%	\$4,671,582	90.69%
<b>TOTAL</b>	<b>356</b>	<b>100.00%</b>	<b>\$5,151,221</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	0	0.00%	\$0	0.00%
African American Males	6	1.69%	\$79,461	1.54%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	6	1.69%	\$92,273	1.79%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	9	2.53%	\$160,960	3.12%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	9	2.53%	\$146,945	2.85%
Non-minority Males	326	91.57%	\$4,671,582	90.69%
<b>TOTAL</b>	<b>356</b>	<b>100.00%</b>	<b>\$5,151,221</b>	<b>100.00%</b>



## **D. Formal Prime Purchase Orders, by Industry**

### **1. Construction Prime Purchase Order Utilization: Purchase Orders Valued \$20,001 to \$1,710,000**

Table 3.26 summarizes all dollars expended by MSD on construction prime purchase orders valued \$20,001 to \$1,710,000. MBEs received 5.61% of the construction prime purchase order dollars; WBEs received 14.53%; and non-M/WBEs received 79.86%.

*African Americans* received 45 or 11.66% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$2,314,507 or 3.59% of the construction prime purchase order dollars.

*Asian-Pacific Americans* received 4 or 1.04% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$180,914 or 0.28% of the construction prime purchase order dollars.

*Asian-Indian Americans* received 0 or 0.00% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$0 or 0.00% of the construction prime purchase order dollars.

*Hispanic Americans* received 4 or 1.04% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$920,933 or 1.43% of the construction prime purchase order dollars.

*Native Americans* received 2 or 0.52% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$206,643 or 0.32% of the construction prime purchase order dollars.

*Caucasian Females* received 86 or 22.28% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$9,374,313 or 14.53% of the construction prime purchase order dollars.

*Non-minority Males* received 245 or 63.47% of the construction prime purchase orders valued \$20,001 to \$1,710,000 awarded during the study period, representing \$51,537,158 or 79.86% of the construction prime purchase order dollars.



**Table 3.26: Construction Prime Purchase Order Utilization:  
Purchase Orders Valued \$20,001 to \$1,710,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	45	11.66%	\$2,314,507	3.59%
Asian-Pacific Americans	4	1.04%	\$180,914	0.28%
Asian-Indian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	4	1.04%	\$920,933	1.43%
Native Americans	2	0.52%	\$206,643	0.32%
Caucasian Females	86	22.28%	\$9,374,313	14.53%
Non-minority Males	245	63.47%	\$51,537,158	79.86%
<b>TOTAL</b>	<b>386</b>	<b>100.00%</b>	<b>\$64,534,468</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	1	0.26%	\$40,170	0.06%
African American Males	44	11.40%	\$2,274,337	3.52%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	4	1.04%	\$180,914	0.28%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	4	1.04%	\$920,933	1.43%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	2	0.52%	\$206,643	0.32%
Caucasian Females	86	22.28%	\$9,374,313	14.53%
Non-minority Males	245	63.47%	\$51,537,158	79.86%
<b>TOTAL</b>	<b>386</b>	<b>100.00%</b>	<b>\$64,534,468</b>	<b>100.00%</b>



## 2. Construction-related Services Prime Purchase Order Utilization: Purchase Orders Valued \$20,001 to \$500,000

Table 3.27 summarizes all dollars expended by MSD on construction-related services prime purchase orders valued \$20,001 to \$500,000. MBEs received 15.86% of all construction-related services prime purchase order dollars; WBEs received 6.68%; and non-M/WBEs received 77.46%.

*African Americans* received 22 or 9.02% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$1,831,794 or 5.90% of the construction-related services prime purchase order dollars.

*Asian-Pacific Americans* received 5 or 2.05% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$281,632 or 0.91% of the construction-related services prime purchase order dollars.

*Asian-Indian Americans* received 3 or 1.23% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$834,875 or 2.69% of the construction-related services prime purchase order dollars.

*Hispanic Americans* received 2 or 0.82% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$578,900 or 1.86% of the construction-related services prime purchase order dollars.

*Native Americans* received 7 or 2.87% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$1,397,468 or 4.50% of the construction-related services prime purchase order dollars.

*Caucasian Females* received 15 or 6.15% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$2,074,111 or 6.68% of the construction-related services prime purchase order dollars.

*Non-minority Males* received 190 or 77.87% of the construction-related services prime purchase orders valued \$20,001 to \$500,000 awarded during the study period, representing \$24,053,295 or 77.46% of the construction-related services prime purchase order dollars.



**Table 3.27: Construction-related Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$20,001 to \$500,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	22	9.02%	\$1,831,794	5.90%
Asian-Pacific Americans	5	2.05%	\$281,632	0.91%
Asian-Indian Americans	3	1.23%	\$834,875	2.69%
Hispanic Americans	2	0.82%	\$578,900	1.86%
Native Americans	7	2.87%	\$1,397,468	4.50%
Caucasian Females	15	6.15%	\$2,074,111	6.68%
Non-minority Males	190	77.87%	\$24,053,295	77.46%
<b>TOTAL</b>	<b>244</b>	<b>100.00%</b>	<b>\$31,052,075</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	16	6.56%	\$1,626,497	5.24%
African American Males	6	2.46%	\$205,297	0.66%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	5	2.05%	\$281,632	0.91%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	3	1.23%	\$834,875	2.69%
Hispanic American Females	1	0.41%	\$180,000	0.58%
Hispanic American Males	1	0.41%	\$398,900	1.28%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	7	2.87%	\$1,397,468	4.50%
Caucasian Females	15	6.15%	\$2,074,111	6.68%
Non-minority Males	190	77.87%	\$24,053,295	77.46%
<b>TOTAL</b>	<b>244</b>	<b>100.00%</b>	<b>\$31,052,075</b>	<b>100.00%</b>



**3. Engineering and Professional Services Prime Purchase Order  
Utilization: Purchase Orders Valued \$20,001 to \$460,000**

Table 3.28 summarizes all dollars expended by MSD on engineering and professional services prime purchase orders valued \$20,001 to \$460,000. MBEs received 6.48% of the engineering and professional services prime purchase order dollars; WBEs received 10.02%; and non-M/WBEs received 83.50%.

*African Americans* received 12 or 2.85% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$1,537,411 or 2.97% of the engineering and professional services prime purchase order dollars.

*Asian-Pacific Americans* received 1 or 0.24% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$23,405 or 0.05% of the engineering and professional services prime purchase order dollars.

*Asian-Indian Americans* received 7 or 1.66% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$1,073,777 or 2.07% of the engineering and professional services prime purchase order dollars.

*Hispanic Americans* received 9 or 2.14% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$727,055 or 1.40% of the engineering and professional services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$0 or 0.00% of the engineering and professional services prime purchase order dollars.

*Caucasian Females* received 45 or 10.69% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$5,194,626 or 10.02% of the engineering and professional services prime purchase order dollars.

*Non-minority Males* received 347 or 82.42% of the engineering and professional services prime purchase orders valued \$20,001 to \$460,000 awarded during the study period, representing \$43,293,266 or 83.50% of the engineering and professional services prime purchase order dollars.



**Table 3.28: Engineering and Professional Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$20,001 to \$460,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	12	2.85%	\$1,537,411	2.97%
Asian-Pacific Americans	1	0.24%	\$23,405	0.05%
Asian-Indian Americans	7	1.66%	\$1,073,777	2.07%
Hispanic Americans	9	2.14%	\$727,055	1.40%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	45	10.69%	\$5,194,626	10.02%
Non-minority Males	347	82.42%	\$43,293,266	83.50%
<b>TOTAL</b>	<b>421</b>	<b>100.00%</b>	<b>\$51,849,539</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	2	0.48%	\$90,651	0.17%
African American Males	10	2.38%	\$1,446,760	2.79%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	1	0.24%	\$23,405	0.05%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	7	1.66%	\$1,073,777	2.07%
Hispanic American Females	2	0.48%	\$77,000	0.15%
Hispanic American Males	7	1.66%	\$650,055	1.25%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	45	10.69%	\$5,194,626	10.02%
Non-minority Males	347	82.42%	\$43,293,266	83.50%
<b>TOTAL</b>	<b>421</b>	<b>100.00%</b>	<b>\$51,849,539</b>	<b>100.00%</b>



**4. Materials, Commodities and Services Prime Purchase Order  
Utilization: Purchase Orders Valued \$20,001 to \$350,000**

Table 3.29 summarizes all dollars expended by MSD on materials, commodities and services prime purchase orders valued \$20,001 to \$350,000. MBEs received 3.81% of the materials, commodities and services prime purchase order dollars; WBEs received 1.07%; and non-M/WBEs received 95.12%.

*African Americans* received 5 or 1.42% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$126,209 or 0.51% of the materials, commodities and services prime purchase order dollars.

*Asian-Pacific Americans* received 10 or 2.85% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$572,449 or 2.31% of the materials, commodities and services prime purchase order dollars.

*Asian-Indian Americans* received 3 or 0.85% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$220,781 or 0.89% of the materials, commodities and services prime purchase order dollars.

*Hispanic Americans* received 1 or 0.28% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$24,920 or 0.10% of the materials, commodities and services prime purchase order dollars.

*Native Americans* received 0 or 0.00% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$0 or 0.00% of the materials, commodities and services prime purchase order dollars.

*Caucasian Females* received 7 or 1.99% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$265,212 or 1.07% of the materials, commodities and services prime purchase order dollars.

*Non-minority Males* received 325 or 92.59% of the materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 awarded during the study period, representing \$23,558,574 or 95.12% of the materials, commodities and services prime purchase order dollars.



**Table 3.29: Materials, Commodities and Services Prime Purchase Order Utilization:  
Purchase Orders Valued \$20,001 to \$350,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	5	1.42%	\$126,209	0.51%
Asian-Pacific Americans	10	2.85%	\$572,449	2.31%
Asian-Indian Americans	3	0.85%	\$220,781	0.89%
Hispanic Americans	1	0.28%	\$24,920	0.10%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	7	1.99%	\$265,212	1.07%
Non-minority Males	325	92.59%	\$23,558,574	95.12%
<b>TOTAL</b>	<b>351</b>	<b>100.00%</b>	<b>\$24,768,145</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	3	0.85%	\$76,412	0.31%
African American Males	2	0.57%	\$49,797	0.20%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	10	2.85%	\$572,449	2.31%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	3	0.85%	\$220,781	0.89%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	1	0.28%	\$24,920	0.10%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	7	1.99%	\$265,212	1.07%
Non-minority Males	325	92.59%	\$23,558,574	95.12%
<b>TOTAL</b>	<b>351</b>	<b>100.00%</b>	<b>\$24,768,145</b>	<b>100.00%</b>



## **V. Summary**

The prime utilization analysis examined prime purchase orders valued at \$660,792,360 that MSD awarded during the study period, including \$429,527,279 for construction, \$59,860,817 for construction-related services, \$105,579,670 for engineering and professional services, and \$65,824,594 for materials, commodities and services. A total of 2,342 purchase orders were analyzed, including 593 for construction, 406 for construction-related services, 597 for engineering and professional services, and 746 for materials, commodities and services.

A utilization analysis was performed at three thresholds for each of the four industries. All purchase orders were analyzed, then prime purchase orders at the informal threshold and then at the formal threshold. The informal threshold that included small purchase orders valued at \$10,001 to \$20,000 for construction; construction-related services; engineering and professional services; and materials, commodities and services purchase orders. The formal threshold, which was limited to exclude outliers included purchase orders valued at \$20,001 to \$1,710,000 for construction; \$20,001 to \$500,000 for construction-related services; \$20,001 to \$460,000 for engineering and professional services; and \$20,001 to \$350,000 for materials, commodities and services.



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# **CHAPTER 4: Subcontractor Utilization Analysis**

## **I. Introduction**

To justify race and gender-conscious remedies to address discrimination following the United States Supreme Court ruling in *Croson*, a disparity study is required to document MSD's utilization of available minority and woman-owned business enterprises (M/WBEs) and non-minority male-owned business enterprises (non-M/WBEs).

The objective of this chapter is to determine the level of M/WBE and non-M/WBE subcontractor utilization by industry, ethnicity, and gender. The subcontractor utilization analysis examined the construction and engineering and professional services subcontracts that Louisville and Jefferson County Metropolitan Sewer District's (MSD) prime contractors awarded during the July 1, 2010, to June 30, 2015, study period (the "study period").

## **II. Data Sources**

An extensive effort was undertaken to compile a comprehensive dataset of construction and engineering and professional services subcontract records. Initially, Mason Tillman Associates, Ltd. (Mason Tillman) received subcontract records from MSD's Finance Division with the prime contract dataset. The dataset included prime contracts with some subcontract records, however the limited subcontract records were primarily M/WBE subcontractors. To analyze a complete subcontract dataset, a number of additional steps were taken to reconstruct the subcontract records. Because the reconstruction involved extensive research on the part of MSD and the prime contractors, a threshold was set for each industry, which excluded smaller contracts that were least likely to have subcontractors. The construction threshold was set at \$1,000,000 and greater, and the engineering and professional services threshold was set at \$500,000 and greater.

After reviewing the limited subcontract records maintained by MSD's Finance Division, steps were taken in conjunction with MSD to reconstruct subcontract records for all prime contracts over the threshold for each industry. The steps included 1) scanned MSD subcontract records, 2) MSD Executive Director Letter, 3) Mason Tillman's on-site data collection at MSD, 4) prime contractor expenditure survey, and 5) subcontractor expenditure survey.

The phased data collection process identified M/WBE subcontractors and non-M/WBE subcontractors that were not in MSD's Finance Division's electronic prime contract dataset. Despite the scope of the research to reconstruct the subcontract data, there were prime contracts, particularly large ones, for which the research did not identify a single non-M/WBE subcontractor. However, the reconstructed construction subcontracts were more comprehensive than the engineering and professional services subcontracts. Indeed, the apparent gaps in the reconstructed engineering and professional services subcontract data were so substantial that a meaningful



statistical analysis could not be performed. The steps taken to reconstruct the subcontract records of M/WBEs and non-M/WBEs in both industries are detailed below.

### **1. MSD Provided Subcontract Records**

MSD's Finance Division provided scanned copies of invoices, bid documents, and subcontractor contracts, which contained award and payment data for both construction and engineering and professional services prime contracts. MSD staff also contacted both construction and engineering and professional services prime contractors to request an electronic report from the company's accounting system identifying the subcontractors, suppliers, and truckers used on each of their MSD projects.

### **2. MSD Executive Director's Letter**

MSD's Executive Director sent a letter to the Chief Executive Officer (CEO) of 22 businesses that received one or more of MSD's prime contracts. The letters were not sent to the CEOs for whom subcontract data had been provided by MSD. The Executive Director's letter requested the name of the prime contractor's subcontractors, subconsultants, truckers, and suppliers, including their payments. MSD managers also made follow-up calls to the CEOs who did not respond to the Executive Director's letter. Responses were received from 12 of the 22 CEOs contacted. All 12 provided subcontractor information.

### **3. On-Site Subcontract Data Collection**

Mason Tillman was permitted to collect subcontract records and certified payroll records from MSD's project and administrative files. During the on-site data collection, construction and engineering and professional services prime contract and project files were reviewed to identify subconsultants, subcontractors, suppliers, and truckers. Additionally, engineers' estimates were reviewed, and MSD managers were interviewed to identify all M/WBE and non-M/WBE subcontractors.

Although numerous subconsultants, subcontractors, suppliers, and truckers were identified from the data collection effort, the majority of the data reconstructed were M/WBE subcontract records. The collected subcontract records were cleaned to identify duplicate subcontracts. Records missing ethnicity and gender were researched to determine both.

### **4. Prime Contractor Expenditure Survey**

Mason Tillman conducted a survey to collect subcontractor and subconsultant data from the prime contractors. Prime contractors were asked to provide the name, award, and payment amount for each subcontractor, subconsultant, supplier, and trucker who worked on their construction contracts valued \$1,000,000 and over and engineering and professional services contracts valued over \$500,000. Mason Tillman made follow-up calls to each prime contractor to address any questions concerning the surveys. Responses were received from 28 percent of the prime contractors surveyed.



## 5. Subcontractor Expenditure Survey

Mason Tillman also surveyed the identified subconsultant, subcontractors, suppliers, and truckers to verify the payment and award data reported by MSD's prime contractors. The subcontractors were also asked to confirm their ethnicity and gender. Mason Tillman made follow-up calls to each subcontractor to address any questions concerning the Study and to encourage the business to verify their subcontract records. Fifteen percent of subcontractors surveyed responded.

### A. Subcontract Data Analysis

A total of 1,664 construction M/WBE and non-M/WBE subcontractors were identified. The construction subcontract dataset was sufficient to perform a subcontractor statistical analysis. For engineering and professional services, only 111 M/WBE and non-M/WBE subcontractors were identified, and most were minority- and woman-owned businesses. Despite the extensive subcontract data collection effort by MSD and Mason Tillman, the engineering and professional services reconstruction effort did not yield sufficient records to perform a disparity analysis. Consequently, MSD's subcontract utilization and disparity analysis is limited to construction. Strategies for examining the engineering and professional services subcontracts are addressed in the *Chapter 11: Recommendations Chapter*.

## III. Subcontractor Utilization

### A. Construction Subcontracts

As depicted in Table 4.1 below, 1,664 construction subcontracts were analyzed. There were \$172,313,833 total construction subcontract dollars expended during the July 1, 2010, to June 30, 2015, study period.

**Table 4.1: Total Construction Subcontracts Awarded and Dollars Expended, July 1, 2010, to June 30, 2015**

Industry	Total Number of Subcontracts	Total Amount Expended
Construction	1,664	\$164,018,486



## **B. Construction Subcontracts**

Table 4.2 depicts the identified construction subcontracts awarded by MSD's prime contractors. Minority-owned businesses (MBE) received 19.13%; Caucasian female-owned businesses (WBE) received 11.90%; and non-minority male-owned businesses (non-M/WBE) received 68.97% of the construction subcontract dollars.

*African Americans* received 55 or 3.31% of the construction subcontracts during the study period, representing \$12,579,043 or 7.67% of the construction subcontract dollars.

*Asian-Pacific Americans* received 7 or 0.42% of the construction subcontracts during the study period, representing \$4,795,532 or 2.92% of the construction subcontract dollars.

*Asian-Indian Americans* received 4 or 0.24% of the construction subcontracts during the study period, representing \$152,558 or 0.09% of the construction subcontract dollars.

*Hispanic Americans* received 16 or 0.96% of the construction subcontracts during the study period, representing \$12,529,733 or 7.64% of the construction subcontract dollars.

*Native Americans* received 4 or 0.24% of the construction subcontracts during the study period, representing \$1,316,141 or 0.80% of the construction subcontract dollars.

*Caucasian Females* received 220 or 13.22% of the construction subcontracts during the study period, representing \$19,516,411 or 11.90% of the construction subcontract dollars.

*Non-minority Males* received 1,358 or 81.61% of the construction subcontracts during the study period, representing \$113,129,067 or 68.97% of the construction subcontract dollars.



**Table 4.2: Construction Subcontractor Utilization,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Number of Contracts</b>	<b>Percent of Contracts</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African Americans	55	3.31%	\$12,579,043	7.67%
Asian-Pacific Americans	7	0.42%	\$4,795,532	2.92%
Asian-Indian Americans	4	0.24%	\$152,558	0.09%
Hispanic Americans	16	0.96%	\$12,529,733	7.64%
Native Americans	4	0.24%	\$1,316,141	0.80%
Caucasian Females	220	13.22%	\$19,516,411	11.90%
Non minority Males	1,358	81.61%	\$113,129,067	68.97%
<b>TOTAL</b>	<b>1,664</b>	<b>100.00%</b>	<b>\$164,018,486</b>	<b>100.00%</b>
<b>Ethnicity and Gender</b>	<b>Number of Contracts</b>	<b>Percent of Contracts</b>	<b>Amount of Dollars</b>	<b>Percent of Dollars</b>
African American Females	18	1.08%	\$5,647,418	3.44%
African American Males	37	2.22%	\$6,931,626	4.23%
Asian-Pacific American Females	1	0.06%	\$25,163	0.02%
Asian-Pacific American Males	6	0.36%	\$4,770,368	2.91%
Asian-Indian American Females	0	0.00%	\$0	0.00%
Asian-Indian American Males	4	0.24%	\$152,558	0.09%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	16	0.96%	\$12,529,733	7.64%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	4	0.24%	\$1,316,141	0.80%
Caucasian Females	220	13.22%	\$19,516,411	11.90%
Non minority Males	1,358	81.61%	\$113,129,067	68.97%
<b>TOTAL</b>	<b>1,664</b>	<b>100.00%</b>	<b>\$164,018,486</b>	<b>100.00%</b>

#### ***IV. Summary***

MSD’s subcontractor utilization analysis examined 1,776 subcontracts valued at \$164,018,486 that MSD’s construction prime contractors awarded from July 1, 2010, to June 30, 2015. Despite an extensive effort to reconstruct the subcontracts awarded by engineering and professional services prime contractors, there were insufficient data to perform a statistical analysis.



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# CHAPTER 5: Market Area Analysis

## I. Market Area Definition

### A. Legal Criteria for Geographic Market Area

The United States Supreme Court’s decision in *City of Richmond v. J.A. Croson Co.*<sup>315</sup> (*Croson*) held that programs established by local governments to set goals for the participation of Minority Business Enterprises (MBE) must be supported by evidence of past discrimination in the award of their contracts. Prior to the *Croson* decision, local agencies could implement race-conscious programs without developing a detailed public record to document the underutilization of MBEs in their award of contracts. Instead, they relied on widely-recognized societal patterns of discrimination.<sup>316</sup>

*Croson* established that a local government could not rely on society-wide discrimination as the basis for a race-based program. Instead, a local government was required to identify discrimination within its own contracting jurisdiction.<sup>317</sup> In *Croson*, the United States Supreme Court found the City of Richmond, Virginia’s MBE construction program to be unconstitutional because there was insufficient evidence of discrimination in the local construction market.

*Croson* was explicit that the local construction market was the appropriate geographical framework within which to perform statistical comparisons of business availability to business utilization. Therefore, the identification of the local market area is particularly important because it establishes the parameters within which to conduct a disparity study.

### B. Application of the Croson Standard

While *Croson* emphasized the importance of the local market area, it provided little assistance in defining its parameters. However, it is informative to review the Court’s definition of the City of Richmond, Virginia’s market area. In discussing the geographic parameters of the constitutional violation that must be investigated, the Court interchangeably used the terms “relevant market,” “Richmond construction industry,”<sup>318</sup> and “city’s construction industry.”<sup>319</sup> These terms were used to define the proper scope for examining the existence of discrimination within the City. This interchangeable use of terms lends support to a definition of market area that coincides with the boundaries of a contracting jurisdiction.

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<sup>315</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

<sup>316</sup> *United Steelworkers v. Weber*, 433 U.S. 193, 198, n. 1 (1979).

<sup>317</sup> *Croson*, 488 U.S. at 497.

<sup>318</sup> *Id.* at 500.

<sup>319</sup> *Id.* at 470.



An analysis of the cases following *Croson* reveals a pattern that provides additional guidance for defining the market area. The body of cases examining the *reasonable* market area definition is *fact-based*—rather than dictated by a specific formula.<sup>320</sup> In *Cone Corporation v. Hillsborough County*,<sup>321</sup> the Eleventh Circuit considered a study in support of Hillsborough County, Florida’s MBE Program, which used minority contractors located in Hillsborough County as the measure of available firms. The court found the program constitutional under the compelling governmental interest element of the strict scrutiny standard.

Hillsborough County’s program was based on statistics indicating that specific discrimination existed in the construction contracts awarded by Hillsborough County, not in the construction industry in general. Hillsborough County extracted data from within its own jurisdictional boundaries and assessed the percentage of minority businesses available in Hillsborough County. The court stated that the disparity study was properly conducted within the “local construction industry.”<sup>322</sup>

Similarly, in *Associated General Contractors v. Coalition for Economic Equity (AGCCII)*,<sup>323</sup> the Ninth Circuit found the City and County of San Francisco, California’s MBE Program to have the factual predicate necessary to survive strict scrutiny. The San Francisco MBE Program was supported by a study that assessed the number of available MBE contractors within San Francisco. The court found it appropriate to use the City and County as the relevant market area in which to conduct a disparity study.<sup>324</sup>

In *Coral Construction v. King County*, the Ninth Circuit held that “a set-aside program is valid only if actual, identifiable discrimination has occurred within the local industry affected by the program.”<sup>325</sup> In support of its MBE program, King County, Washington, offered studies compiled by other jurisdictions, including entities completely within the County, others coterminous with the boundaries of the County, as well as a jurisdiction completely outside of King County. The plaintiffs contended that *Croson* required King County, Washington, to compile its own data and cited *Croson* as prohibiting data sharing.

The court found that data sharing could potentially lead to the improper use of societal discrimination data as the factual basis for a local MBE program and that innocent third parties could be unnecessarily burdened if an MBE program were based on outside data. However, the court also found that the data from entities in King County and from coterminous jurisdictions

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<sup>320</sup> See e.g., *Concrete Works of Colorado v. City of Denver, Colorado*, 36 F.3d 1513, 1528 (10th Cir. 1994) (“*Concrete Works*”).

<sup>321</sup> *Cone Corporation v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990).

<sup>322</sup> *Id.* at 915.

<sup>323</sup> *Associated General Contractors of California v. Coalition for Economic Equity and City and County of San Francisco*, 950 F.2d 1401 (9th Cir. 1991).

<sup>324</sup> *AGCCII*, 950 F.2d at 1415.

<sup>325</sup> *Coral Construction Co. v. King County*, 941 F.2d 910 (9th Cir. 1991) (*Coral Construction*).



were relevant to discrimination in the County. They also found that the data posed no risk of unfairly burdening innocent third parties.

The court concluded that data gathered by a neighboring county could not be used to support King County’s MBE program. The court noted, “It is vital that a race-conscious program align itself as closely to the scope of the problem sought to be rectified by the governmental entity. To prevent overbreadth, the enacting jurisdiction should limit its factual inquiry to the presence of discrimination within its own boundaries.”<sup>326</sup> However, the court did note that the “world of contracting does not conform itself neatly to jurisdictional boundaries.”<sup>327</sup>

There are other situations in which courts have approved a market area definition that extended beyond a jurisdiction’s geographic boundaries. In *Concrete Works v. City and County of Denver (Concrete Works)*,<sup>328</sup> the United States Court of Appeals for the Tenth Circuit directly addressed the issue of whether or not extra-jurisdictional evidence of discrimination can be used to determine the “local market area” for a disparity study. In *Concrete Works*, the defendant relied on evidence of discrimination in the six-county Denver, Colorado Metropolitan Statistical Area (Denver MSA) to support its MBE program. Plaintiffs argued that the federal constitution prohibited consideration of evidence beyond jurisdictional boundaries. The court disagreed.

Critical to the court’s acceptance of the Denver MSA as the relevant local market was the finding that more than 80% of construction and design contracts awarded by the City and County of Denver were awarded to contractors within the Denver MSA. Another consideration was that the City and County of Denver’s analysis was based on United States Census data, which were available for the Denver MSA but not for the City of Denver itself. There was no undue burden placed on nonculpable parties, as the City and County of Denver had expended a majority of its construction contract dollars within the area defined as the local market. Citing *AGCC II*,<sup>329</sup> the court noted “that any plan that extends race-conscious remedies beyond territorial boundaries must be based on very specific findings that actions that the city has taken in the past have visited racial discrimination on such individuals.”<sup>330</sup>

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<sup>326</sup> *Coral Construction*, 941 F.2d at 917.

<sup>327</sup> *Id.*

<sup>328</sup> *Concrete Works*, 36 F.3d at 1528.

<sup>329</sup> *AGCC II*, 950 F.2d at 1401.

<sup>330</sup> *Concrete Works*, 36 F.3d at 1528.



The court concluded that data gathered by a neighboring county could not be used to support King County’s MBE program. The court noted, “It is vital that a race-conscious program align itself as closely to the scope of the problem sought to be rectified by the governmental entity. To prevent overbreadth, the enacting jurisdiction should limit its factual inquiry to the presence of discrimination within its own boundaries.”<sup>331</sup> However, the court did note that the “world of contracting does not conform itself neatly to jurisdictional boundaries.”<sup>332</sup>

Similarly, New York State conducted a disparity study in which the geographic market consisted of New York State and eight counties in northern New Jersey. The geographic market was defined as the area encompassing the location of businesses that received more than 90% of the dollar value of all contracts awarded by the agency.<sup>333</sup>

## **II. Market Area Analysis**

Although *Croson* and its progeny do not provide a bright-line rule for the delineation of the local market area, taken collectively, the case law supports a definition of the market area as the geographical boundaries of the government entity. Given Louisville and Jefferson County Metropolitan Sewer District’s (MSD) service area, the Study’s market area is determined to be the geographical boundaries of Jefferson County.

### **A. Summary of the Distribution of All Prime Contracts Awarded**

MSD awarded 2,342 prime contracts valued at \$660,792,361 from the July 1, 2010, to June 30, 2015, study period. Businesses located in the market area received 59.52% of the prime contracts and 56.73% of the dollars. The distribution of all prime contracts awarded, and dollars received by all firms domiciled inside and outside of the market area is depicted in Table 5.1.



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<sup>331</sup> *Coral Constr. Co. v. King County*, 941 F.2d 910, 917 (1991).

<sup>332</sup> *Id.*

<sup>333</sup> *Opportunity Denied! New York State’s Study*, 26 Urban Lawyer No. 3, Summer 1994.

**Table 5.1: Distribution of All Contracts Awarded**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
Jefferson	1,394	59.52%	\$374,839,416	56.73%
Lexington-Fayette	72	3.07%	\$80,963,953	12.25%
Anderson	2	0.09%	\$11,380,199	1.72%
Warren	5	0.21%	\$8,603,834	1.30%
Monroe	4	0.17%	\$7,472,753	1.13%
Bullitt	8	0.34%	\$2,797,693	0.42%
Oldham	42	1.79%	\$2,641,716	0.40%
Washington	41	1.75%	\$2,123,341	0.32%
Bath	14	0.60%	\$1,130,995	0.17%
Kenton	29	1.24%	\$886,039	0.13%
Clark	2	0.09%	\$647,552	0.10%
Scott	6	0.26%	\$644,582	0.10%
Breckinridge	25	1.07%	\$554,462	0.08%
Adair	11	0.47%	\$482,374	0.07%
Boone	6	0.26%	\$442,321	0.07%
Meade	4	0.17%	\$348,377	0.05%
Nelson	7	0.30%	\$264,338	0.04%
Franklin	3	0.13%	\$148,963	0.02%
Grayson	4	0.17%	\$71,000	0.01%
Hardin	3	0.13%	\$57,568	0.01%
Barren	1	0.04%	\$33,954	0.01%
Shelby	2	0.09%	\$27,422	0.00%
Edmonson	1	0.04%	\$18,600	0.00%
Daviess	1	0.04%	\$14,180	0.00%
Out of State	652	27.84%	\$163,853,029	24.80%
Out of Country	3	0.13%	\$343,701	0.05%

**B. Distribution of Construction Prime Contracts**

MSD awarded 593 construction prime contracts valued at \$429,527,279 during the study period. Businesses located in the market area received 73.52% of the construction prime contracts and 51.29% of the dollars. The distribution by county of the construction prime contracts awarded, and dollars received by all firms domiciled inside and outside of the market area is depicted in Table 5.2.



**Table 5.2: Distribution of Construction Prime Contracts**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
Jefferson	436	73.52%	\$220,285,704	51.29%
Lexington-Fayette	8	1.35%	\$72,048,483	16.77%
Anderson	2	0.34%	\$11,380,199	2.65%
Warren	4	0.67%	\$8,583,834	2.00%
Monroe	4	0.67%	\$7,472,753	1.74%
Bullitt	3	0.51%	\$2,326,350	0.54%
Oldham	37	6.24%	\$1,944,967	0.45%
Breckinridge	23	3.88%	\$517,462	0.12%
Nelson	7	1.18%	\$264,338	0.06%
Washington	1	0.17%	\$63,496	0.01%
Grayson	1	0.17%	\$35,000	0.01%
Bath	2	0.34%	\$25,650	0.01%
Shelby	1	0.17%	\$10,074	0.00%
Out of State	64	10.79%	\$104,568,970	24.35%

**C. Distribution of Construction-related Services Prime Contracts**

MSD awarded 406 construction-related services prime contracts valued at \$59,860,817 during the study period. Businesses located in the market area received 60.34% of the construction-related services prime contracts and 79.69% of the dollars. The distribution of the construction-related services prime contracts awarded, and dollars received by all firms domiciled inside and outside of the market area is depicted in Table 5.3.

**Table 5.3: Distribution of Construction-related Services Prime Contracts**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
Jefferson	245	60.34%	\$47,702,593	79.69%
Washington	25	6.16%	\$1,423,175	2.38%
Bath	12	2.96%	\$1,105,345	1.85%
Bullitt	5	1.23%	\$471,343	0.79%
Adair	5	1.23%	\$398,774	0.67%
Meade	4	0.99%	\$348,377	0.58%
Oldham	2	0.49%	\$173,660	0.29%
Kenton	4	0.99%	\$55,715	0.09%
Breckinridge	2	0.49%	\$37,000	0.06%
Grayson	3	0.74%	\$36,000	0.06%
Shelby	1	0.25%	\$17,348	0.03%
Daviess	1	0.25%	\$14,180	0.02%
Out of State	97	23.89%	\$8,077,308	13.49%



**D. Distribution of Engineering and Professional Services Prime Contracts**

MSD awarded 597 engineering and professional services prime contracts valued at \$105,579,670 during the study period. Businesses located in the market area received 73.03% of the engineering and professional services prime contracts and 82.63% of the dollars. The distribution by county of the engineering and professional services prime contracts awarded, and dollars received by all firms domiciled inside and outside of the market area is depicted in Table 5.4.

**Table 5.4: Distribution of Engineering and Professional Services Prime Contracts**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
Jefferson	436	73.03%	\$87,241,039	82.63%
Lexington-Fayette	50	8.38%	\$6,947,063	6.58%
Clark	2	0.34%	\$647,552	0.61%
Washington	3	0.50%	\$399,192	0.38%
Oldham	2	0.34%	\$396,500	0.38%
Franklin	3	0.50%	\$148,963	0.14%
Scott	2	0.34%	\$122,913	0.12%
Kenton	3	0.50%	\$35,498	0.03%
Barren	1	0.17%	\$33,954	0.03%
Warren	1	0.17%	\$20,000	0.02%
Hardin	1	0.17%	\$11,500	0.01%
Out of State	91	15.24%	\$9,350,495	8.86%
Out of Country	2	0.34%	\$225,001	0.21%

**E. Distribution of Materials, Commodities and Services Prime Contracts**

MSD awarded 746 materials, commodities and services prime contracts valued at \$65,824,594 during the study period. Businesses located in the market area received 37.13% of the materials, commodities and services prime contracts and 29.79% of the dollars. The distribution by county of the materials, commodities and services prime contracts awarded, and dollars received by all firms domiciled inside and outside of the market area is depicted in Table 5.5.



**Table 5.5: Distribution of Materials, Commodities and Services Prime Contracts**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
Jefferson	277	37.13%	\$19,610,079	29.79%
Lexington-Fayette	14	1.88%	\$1,968,407	2.99%
Kenton	22	2.95%	\$794,826	1.21%
Scott	4	0.54%	\$521,669	0.79%
Boone	6	0.80%	\$442,321	0.67%
Washington	12	1.61%	\$237,479	0.36%
Oldham	1	0.13%	\$126,589	0.19%
Adair	6	0.80%	\$83,600	0.13%
Hardin	2	0.27%	\$46,068	0.07%
Edmonson	1	0.13%	\$18,600	0.03%
Out of State	400	53.62%	\$41,856,256	63.59%
Out of Country	1	0.13%	\$118,700	0.18%

### ***III. Summary***

During the study period, MSD awarded 2,342 construction, construction-related services, engineering and professional services, and materials, commodities and services prime contracts valued at \$660,792,361. MSD awarded 59.52% of prime contracts and 56.73% of dollars to businesses domiciled within the market area.

Table 5.6 presents an overview of all prime contracts and the share of dollars that was spent in the market area.



**Table 5.6: Market Area and Distribution of Contracts**

<b>Geographic Area</b>	<b>Number of Purchase Orders</b>	<b>Percent of Purchase Orders</b>	<b>Total Dollars</b>	<b>Percent of Dollars</b>
<b>Combined Industries</b>				
Market Area	1,394	59.52%	\$374,839,416	56.73%
Outside Market Area	948	40.48%	\$285,952,945	43.27%
<b>TOTAL</b>	<b>2,342</b>	<b>100.00%</b>	<b>\$660,792,361</b>	<b>100.00%</b>
<b>Construction</b>				
Market Area	436	73.52%	\$220,285,704	51.29%
Outside Market Area	157	26.48%	\$209,241,575	48.71%
<b>TOTAL</b>	<b>593</b>	<b>100.00%</b>	<b>\$429,527,279</b>	<b>100.00%</b>
<b>Construction-related Services</b>				
Market Area	245	60.34%	\$47,702,593	79.69%
Outside Market Area	161	39.66%	\$12,158,224	20.31%
<b>TOTAL</b>	<b>406</b>	<b>100.00%</b>	<b>\$59,860,817</b>	<b>100.00%</b>
<b>Engineering and Professional Services</b>				
Market Area	436	73.03%	\$87,241,039	82.63%
Outside Market Area	161	26.97%	\$18,338,631	17.37%
<b>TOTAL</b>	<b>597</b>	<b>100.00%</b>	<b>\$105,579,670</b>	<b>100.00%</b>
<b>Materials, Commodities and Services</b>				
Market Area	277	37.13%	\$19,610,079	29.79%
Outside Market Area	469	62.87%	\$46,214,515	70.21%
<b>TOTAL</b>	<b>746</b>	<b>100.00%</b>	<b>\$65,824,594</b>	<b>100.00%</b>

*Construction Prime Contracts:* 436, or 73.52%, of construction prime contracts were awarded to market area businesses. Construction prime contracts in the market area accounted for \$220,285,704, or 51.29%, of the total construction prime contract dollars.

*Construction-related Services Prime Contracts:* 245, or 60.34%, of construction-related services prime contracts were awarded to market area businesses. Construction-related services prime contracts in the market area accounted for \$47,702,593, or 79.69%, of the total construction-related services prime contract dollars.

*Engineering and Professional Services Prime Contracts:* 436, or 73.03%, of engineering and professional services prime contracts were awarded to market area businesses. Engineering and professional services prime contracts in the market area accounted for \$87,241,039, or 82.63%, of the total engineering and professional services prime contract dollars.

*Materials, Commodities and Services Prime Contracts:* 277, or 37.13%, of materials, commodities and services prime contracts were awarded to market area businesses. Materials, commodities and services prime contracts in the market area accounted for \$19,610,079, or 29.79%, of the total materials, commodities and services prime contract dollars.



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# **CHAPTER 6: Prime Contractor and Subcontractor Availability Analysis**

## **I. Introduction**

The ruling in *City of Richmond v. J.A. Croson Co. (Croson)*, defines available businesses as those in the jurisdiction’s market area that are willing and able to provide goods or services procured by the jurisdiction.<sup>334</sup> Both minority- and woman-owned business enterprises (M/WBEs)<sup>335</sup> and non-minority male-owned business enterprises (non-M/WBEs) within the Louisville and Jefferson County Metropolitan Sewer District’s (MSD) market area that are ready, willing, and able to provide the goods and services must be enumerated to determine total availability. The market area for the four industries — construction, construction-related services, engineering and professional services, and materials, commodities and services — is the geographical boundaries of Jefferson County, as defined in *Chapter 5: Market Area Analysis*.

Sources for determining the number of willing and able M/WBEs and non-M/WBEs in the market area, must be based on whether they illuminate two aspects about the population in question:

1. the business’s interest in contracting with the jurisdiction, as implied by the term “willing”
2. the business’s ability or capacity to provide the solicited goods and services, as implied by the term “able.”

## **II. Prime Contractor Availability Data Sources**

### **A. Identification of Willing Businesses Within the Market Area**

Mason Tillman used four sources to identify businesses in the market area that provide the goods and services to MSD.

- MSD’s records, including utilized businesses, vendors lists, and bidders lists
- Government certification directories from agencies that certify M/WBEs, small Businesses, local businesses, veteran-owned businesses, and disadvantaged businesses
- Business association membership lists.
- Business owners who attended MSD’s Disparity Study business community meetings.

Only businesses determined to be willing were added to the availability list.



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<sup>334</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

<sup>335</sup> Woman-owned Business Enterprises are also known as Caucasian female-owned businesses.

Extensive targeted outreach to business associations in the market area was performed to identify and secure business membership directories to identify non-M/WBEs that are typically not found in government certification sources. This effort included written and electronic correspondence, telephone reminders, and distribution of non-disclosure agreements describing Mason Tillman's intent to maintain the confidentiality of association members. Business associations that refused to provide their lists were provided the business survey to distribute to their members.

Lists from the four types of sources were ranked, with the highest rank assigned to the utilized businesses, bidders, and vendors. Government certification lists ranked second, business association membership lists ranked third, and community meeting attendees ranked fourth. Therefore, the first document used to build the availability list was MSD's utilized businesses. Bidders and vendor lists were then appended to the list. Businesses identified from federal and local government certification agencies were thereafter appended to the lists. The local certification lists included small, minority, and woman disadvantaged business enterprises (S/M/WBEs). Businesses identified from association membership lists that affirmed their willingness through a survey of business association members were also appended. The business associations included trade organizations, professional organizations, and chambers of commerce.

From the four sources, 768 unique market area businesses that provide goods or services in one or more of the four industries were identified. An accounting of the willing businesses derived by source is listed below.

#### **1. MSD Records**

Two hundred forty-three (243) unique market area businesses were added to the availability database from MSD's utilized businesses and vendor and bidder lists.

#### **2. Government Certification Lists**

Three hundred thirty-four (334) unique market area businesses were added to the availability database from government certification lists.

#### **3. Business Association Membership Lists**

One hundred eighty-five (185) unique market area businesses were identified from business association membership lists. A total of 1,345 businesses were surveyed to determine their willingness to contract with MSD. Of the 1,345 surveyed businesses, 20 refused to participate, 635 did not respond, 82 telephone numbers were disconnected, and 608 businesses completed the survey, 185 of which were deemed willing and added to the availability database.

#### **4. Community Meetings**

Six (6) unique market area businesses were added to the availability database from MSD's community meetings.



**B. Prime Contractor Sources**

Table 6.1 lists the sources from which the list of willing businesses was compiled.

**Table 6.1: Prime Contractor Availability Data Sources**

Source	Type of Information
<b>MSD Records</b>	
MSD Prime Utilized Vendors	Non-M/WBE and M/WBE
<b>Government Certification Directories</b>	
City of Louisville, Kentucky	Non-M/WBE and M/WBE
DOT Indiana Government Center North	Non-M/WBE and M/WBE
Indiana - Department of Administration	Non-M/WBE and M/WBE
Kentucky Department of Transportation	Non-M/WBE and M/WBE
Kentucky Minority and Women Business Enterprise Certification Program	M/WBE
Kentucky Transportation Cabinet Certified and Prequalified Consultants	Non-M/WBE and M/WBE
Kentucky Transportation Cabinet Certified and Prequalified DBEs	M/WBE
Kentucky Transportation Cabinet Certified Consultant Directory	Non-M/WBE and M/WBE
Kentucky Transportation Cabinet Certified Material Suppliers	Non-M/WBE and M/WBE
Kentucky Transportation Cabinet Certified SBE Directory	Non-M/WBE and M/WBE
MSD MBE/WBE Certification List (Current and Archived Database)	Non-M/WBE and M/WBE
United States Small Business Administration, 8(a)	M/WBE
United States Small Business Administration, HUB Zone	Non-M/WBE and M/WBE
United States Small Business Administration, Minority-owned Businesses	M/WBE
United States Small Business Administration, Small Disadvantaged Businesses	Non-M/WBE and M/WBE
United States Small Business Administration, Women-owned Businesses	M/WBE
United States Small Business Administration, Veteran-owned businesses	Non-M/WBE and M/WBE
<b>Business Association Membership Lists</b>	
Associated General Contractors of America, Kentucky Office	Non-M/WBE and M/WBE
Builders Association of South Central Kentucky	Non-M/WBE and M/WBE
Builders Exchange of Kentucky	Non-M/WBE and M/WBE
City of Louisville, Kentucky Louisville Metro Government Vendor Directory	Non-M/WBE and M/WBE
Greater Cincinnati and Northern Kentucky African American Chamber of Commerce	Non-M/WBE and M/WBE
Independent Electrical Contractors Association of Kentucky and Southern Indiana	Non-M/WBE and M/WBE
Kentucky Groundwater Association	Non-M/WBE and M/WBE



Source	Type of Information
<b>Business Association Membership Lists</b>	
Kentucky Roofing Contractors Association	Non-M/WBE and M/WBE
Kentucky Sheet Metal Contractors Association	Non-M/WBE and M/WBE
Middletown Chamber of Commerce	Non-M/WBE and M/WBE
National Electrical Contractors Association, Louisville Chapter	Non-M/WBE and M/WBE
Plantmix Asphalt Industry of Kentucky	Non-M/WBE and M/WBE
Structural Engineers Association of Kentucky	Non-M/WBE and M/WBE
The Chamber Jeffersontown	Non-M/WBE and M/WBE
The Chamber of St. Matthews	Non-M/WBE and M/WBE
Towing & Recovery Association of Kentucky	Non-M/WBE and M/WBE
United States Green Building Council	Non-M/WBE and M/WBE

**C. Determination of Willingness**

All businesses included in the availability analysis were determined to be willing to contract with MSD. “Willingness” is defined in *Croson* and its progeny as a business’s interest in contracting with the government. To be classified as willing, each business must have bid on a government contract, secured government certification, or affirmed an interest in contracting with MSD through the willingness survey. Any business identified as “willing” from more than one source was counted only once in an industry. A business that was willing to provide goods or services in more than one industry was listed uniquely in each relevant industry’s availability list. Businesses identified from the four sources listed in Table 6.1 demonstrated their willingness to perform on public contracts.

**D. Distribution of Available Prime Contractors by Source, Ethnicity, and Gender**

Tables 6.2 through 6.5 present the distribution of willing prime contractors by source. The highest ranked source was the prime contractors utilized by MSD. Each ranked business is counted only once. For example, a utilized prime contractor counted in the prime contractor utilization source was not counted a second time as a bidder, certified business, or company identified from a business association list.

A distribution of available businesses by source was calculated for each industry. As noted in Table 6.2, 83.77% of the construction businesses identified were derived from MSD’s records, other government agencies’ records, and government certification lists. Companies identified through the business association membership lists and the community meeting attendee lists represent 16.23% of the willing businesses.



**Table 6.2: Distribution of Prime Contractor Availability Data Sources,  
Construction**

<b>Sources</b>	<b>M/WBE Percentage</b>	<b>Non-M/WBE Percentage</b>	<b>Source Percentage</b>
Prime Contractor Utilization	16.36%	44.44%	28.27%
Certification Lists	81.82%	19.75%	55.50%
<b>Subtotal</b>	<b>98.18%</b>	<b>64.20%</b>	<b>83.77%</b>
Community Meeting Attendees	0.91%	3.70%	2.09%
Willingness Survey	0.91%	32.10%	14.14%
<b>Subtotal</b>	<b>1.82%</b>	<b>35.80%</b>	<b>16.23%</b>
<b>Grand Total*</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*The percentages may not total 100% due to rounding.

Table 6.3 depicts the data sources for the available construction-related services prime contractors. As noted, 80.34% of the construction-related services businesses identified were derived from MSD’s records, government agencies’ records, and government certification lists. Companies identified through the business association membership lists represent 19.66% of the willing businesses.

**Table 6.3: Distribution of Prime Contractor Availability Data Sources,  
Construction-related Services**

<b>Sources</b>	<b>M/WBE Percentage</b>	<b>Non-M/WBE Percentage</b>	<b>Source Percentage</b>
Prime Contractor Utilization	22.99%	56.04%	39.89%
Certification Lists	74.71%	7.69%	40.45%
<b>Subtotal</b>	<b>97.70%</b>	<b>63.74%</b>	<b>80.34%</b>
Willingness Survey	2.30%	36.26%	19.66%
<b>Subtotal</b>	<b>2.30%</b>	<b>36.26%</b>	<b>19.66%</b>
<b>Grand Total*</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*The percentages may not total 100% due to rounding.

Table 6.4 depicts the data sources for the available engineering and professional services prime contractors. As noted, 82.67% of the engineering and professional services businesses identified were derived from MSD’s records, other government agencies’ records, and government



certification lists. Companies identified through the business association membership lists and the community meeting attendee lists represent 17.33% of the willing businesses.

**Table 6.4: Distribution of Prime Contractor Availability Data Sources, Engineering and Professional Services**

<b>Sources</b>	<b>M/WBE Percentage</b>	<b>Non-M/WBE Percentage</b>	<b>Source Percentage</b>
Prime Contractor Utilization	25.00%	59.83%	43.11%
Certification List	74.07%	7.69%	39.56%
<b>Subtotal</b>	<b>99.07%</b>	<b>67.52%</b>	<b>82.67%</b>
Willingness Survey	0.93%	30.77%	16.44%
Business Survey	0.00%	1.71%	0.89%
<b>Subtotal</b>	<b>0.93%</b>	<b>32.48%</b>	<b>17.33%</b>
<b>Grand Total*</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*The percentages may not total 100% due to rounding.

Table 6.5 depicts the data sources for the available materials, commodities and services prime contractors. As noted, 68.84% of the materials, commodities and services businesses identified were derived from MSD's records, other government agencies' records, and government certification lists. Companies identified through the business association membership lists and the community meeting attendee lists represent 31.16% of the willing businesses.



**Table 6.5: Distribution of Prime Contractor Availability Data Sources,  
Materials, Commodities and Services**

Sources	M/WBE Percentage	Non-M/WBE Percentage	Source Percentage
Prime Contractor Utilization	18.68%	47.03%	37.68%
Certification Lists	79.12%	7.57%	31.16%
<b>Subtotal</b>	<b>97.80%</b>	<b>54.59%</b>	<b>68.84%</b>
Community Meeting Attendees	0.00%	1.08%	0.72%
Willingness Survey	2.20%	43.24%	29.71%
Business Survey	0.00%	1.08%	0.72%
<b>Subtotal</b>	<b>2.20%</b>	<b>45.41%</b>	<b>31.16%</b>
<b>Grand Total*</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*The percentages may not total 100% due to rounding.

### **III. Capacity**

The second component of the availability requirement set forth in *Croson* is to assess the capacity or ability of a business to perform the contracts awarded by the jurisdiction.<sup>336</sup> Though capacity is not defined in *Croson*, it has been considered in subsequent cases. Specifically, the Third Circuit held certification to be a valid method of defining availability.<sup>337</sup> In *Contractors Association of Eastern Pennsylvania v. City of Philadelphia (Philadelphia)*, the court held that utilizing a list of certified contractors was a rational approach to identify qualified, willing firms.<sup>338</sup> The court stated “[a]n analysis is not devoid of probative value simply because it may theoretically be possible to adopt a more refined approach [of qualification].”<sup>339</sup> As noted in *Philadelphia*, “[t]he issue of qualifications can be approached at different levels of specificity[.]”<sup>340</sup> Researchers have attempted to define capacity by profiling the age of the business, education of the business owner, revenue, number of employees, and bonding limits using census data. However, these conventional indices are themselves affected by race and gender discrimination.<sup>341</sup>

<sup>336</sup> *Croson*, 488 U.S. 469.

<sup>337</sup> *Contractors Ass’n of E. Pa.*, 91 F.3d at 603.

<sup>338</sup> *Id.*

<sup>339</sup> *Id.* at 603; see also, *Concrete Works IV*, 321 F.3d at 966 (noting a less sophisticated method to calculate availability does not render a disparity study flawed.)

<sup>340</sup> *Contractors Ass’n of E. Pa.*, 91 F.3d at 610.

<sup>341</sup> David G. Blanchflower & Phillip B. Levine & David J. Zimmerman, 2003. "Discrimination in the Small-Business Credit Market," *The Review of Economics and Statistics*, MIT Press, vol. 85(4).



Mason Tillman used five methods to compare the capacity of M/WBEs to similarly situated Caucasian male-owned businesses and control for the impact of race and gender discrimination. The first method is a review of the distribution of purchase orders to determine the size of the purchase orders that MSD awarded. The second is the identification of the largest purchase orders awarded to M/WBEs. The third is an analysis of the frequency distribution of MSD purchase orders awarded to M/WBEs and Caucasian male-owned firms. The fourth is a threshold analysis that limited the range of the formal prime purchase orders to be analyzed by eliminating outliers. The fifth is an assessment of capacity-related economic factors of M/WBEs and Caucasian male-owned businesses using the results of the online capacity survey.

**A. Prime Purchase Order Size Distribution**

All of MSD’s purchase ranked were ordered by the size of the award to determine the distribution and gauge the capacity required to perform MSD’s purchase orders. In Table 6.6, purchase order awards in the four industries were grouped into eight ranges<sup>342</sup> and are presented by non-minority females, non-minority males, minority females, and minority males.

More than 70% of the prime purchase orders awarded by MSD were valued less than \$100,000. Additionally, 84.84% were less than \$250,000, 92.06% were less than \$500,000, 95.77% were less than \$1,000,000, and 98.72% were less than \$3,000,000. Only 1.28% of the awarded prime purchase orders were valued \$3,000,000 and greater.

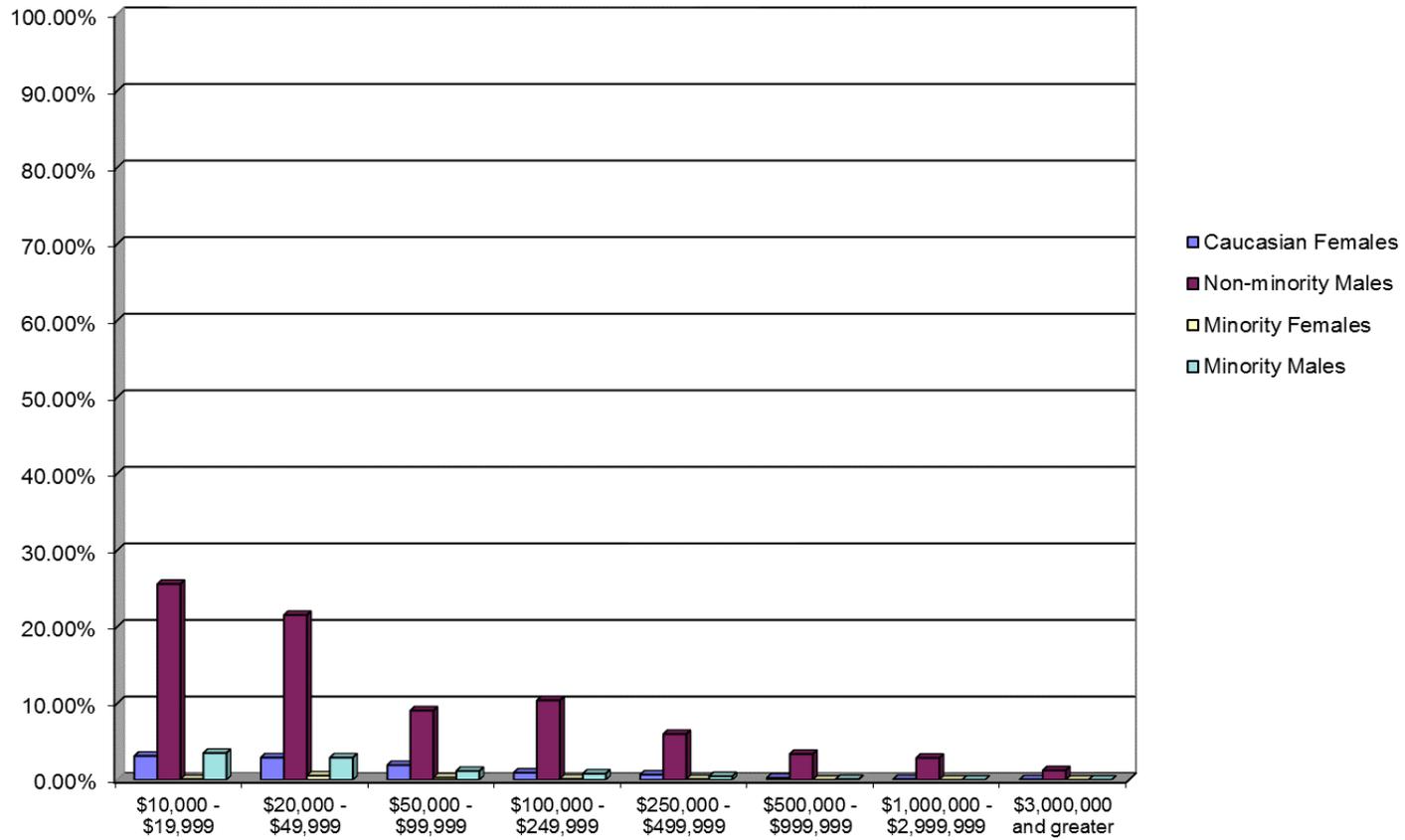
**Table 6.6: All Industry Purchase Orders by Size  
July 1, 2010, to June 30, 2015**

Size	Non-minority				Minority				Total	
	Females		Males		Females		Males		Freq	Percent
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent		
\$10,000 - \$19,999	73	3.12%	598	25.53%	3	0.13%	82	3.50%	756	32.28%
\$20,000 - \$49,999	68	2.90%	505	21.56%	14	0.60%	66	2.82%	653	27.88%
\$50,000 - \$99,999	45	1.92%	215	9.18%	7	0.30%	24	1.02%	291	12.43%
\$100,000 - \$249,999	22	0.94%	243	10.38%	3	0.13%	19	0.81%	287	12.25%
\$250,000 - \$499,999	16	0.68%	140	5.98%	2	0.09%	11	0.47%	169	7.22%
\$500,000 - \$999,999	6	0.26%	79	3.37%	0	0.00%	2	0.09%	87	3.71%
\$1,000,000 - \$2,999,999	2	0.09%	67	2.86%	0	0.00%	0	0.00%	69	2.95%
\$3,000,000 and greater	1	0.04%	29	1.24%	0	0.00%	0	0.00%	30	1.28%
<b>Total</b>	<b>233</b>	<b>9.95%</b>	<b>1,876</b>	<b>80.10%</b>	<b>29</b>	<b>1.24%</b>	<b>204</b>	<b>8.71%</b>	<b>2,342</b>	<b>100.00%</b>



<sup>342</sup> The eight-dollar ranges are \$10,000 - \$19,999; \$20,000 - \$49,999; \$50,000 - \$99,999; \$100,000 - \$249,999; \$250,000 - \$499,999; \$500,000 - \$999,999; \$1,000,000 - \$2,999,999; and \$3,000,000 and greater.

**Chart 6.1: All Industry Purchase Orders by Size,  
July 1, 2010, to June 30, 2015**



The size of MSD’s prime purchase orders is a determinant of the capacity that a willing business needs to be competitive at the prime purchase order level. The fact that more than 70% of MSD’s purchase orders are less than \$100,000 means the capacity needed to perform a significant number of MSD’s purchase orders is not considerable.

**B. Largest M/WBE Prime Purchase Orders Awarded by Industry**

This analysis classified the largest purchase orders that MSD awarded by industry, ethnicity, and gender to determine M/WBEs’ capacity to perform large, competitive contracts. Table 6.7 shows that M/WBEs demonstrated the capacity to perform purchase orders as large as \$4,215,644 in construction, \$803,400 in construction-related services, \$1,191,000 in engineering and professional services, and \$560,247 in materials, commodities and services. The size of the largest prime purchase orders that MSD awarded to M/WBEs means M/WBEs have the capacity to perform substantial formal purchase orders.

**Table 6.7: Largest Prime Purchase Orders Awarded by MSD to M/WBEs by Industry**

<b>Ethnic/Gender Group</b>	<b>Construction</b>	<b>Construction-related Services</b>	<b>Engineering and Professional Services</b>	<b>Materials, Commodities and Services</b>
African American Female	----	\$386,957	\$48,910	\$28,131
African American Male	\$146,059	\$29,457	\$398,900	\$20,600
Asian-Pacific American Female	----	----	----	----
Asian-Pacific American Male	\$97,315	\$15,747	\$23,405	\$179,086
Asian-Indian American Female	----	----	----	----
Asian-Indian American Male	----	\$369,500	\$797,800	\$83,909
Hispanic American Female	----	----	\$48,000	----
Hispanic American Male	\$585,137	\$398,900	\$486,024	\$24,920
Native American Female	----	----	----	----
Native American Male	\$150,000	\$411,975	----	----
Caucasian Female	\$4,215,644	\$803,400	\$1,191,000	\$560,247
<b>Largest Dollar Amounts MBEs</b>	<b>\$585,137</b>	<b>\$411,975</b>	<b>\$797,800</b>	<b>\$179,086</b>
<b>Largest Dollar Amounts WBEs</b>	<b>\$4,215,644</b>	<b>\$803,400</b>	<b>\$1,191,000</b>	<b>\$560,247</b>

(----) Denotes a group that was not awarded any contracts within the respective industry.

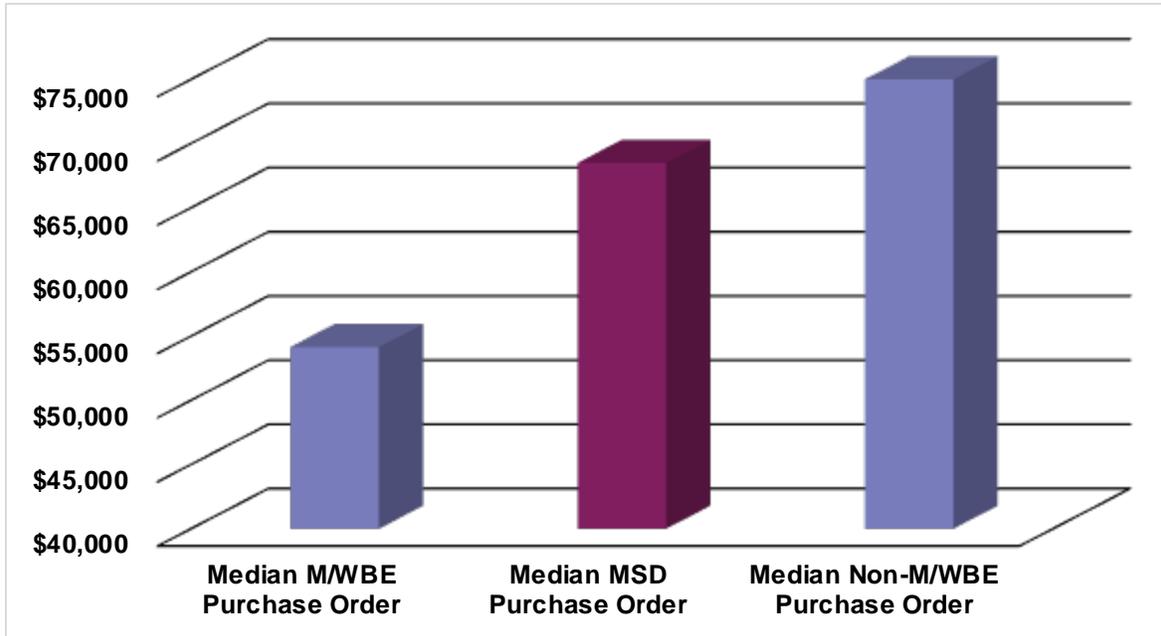
**C. Frequency Distribution**

MSD’s formal purchase orders range from \$11,227 to \$47,906,892. A frequency distribution was calculated for all MSD prime purchase orders to find the midpoint between the smallest and largest purchase orders. The same distribution was calculated separately for M/WBEs and non-M/WBEs. As shown in Chart 6.2, the center point of all MSD prime purchase orders, for all industries, was \$68,496. That is, 50% of all purchase orders were above and 50% below \$68,496. The median prime purchase order awarded to M/WBEs was \$54,150, and the median prime purchase order awarded to Caucasian males was \$75,000.



These statistics reveal only a \$14,346 difference between the median of all MSD prime purchase orders and the median prime purchase order performed by M/WBEs, illustrating that M/WBEs have comparable capacity to perform a significant number of the prime purchase orders awarded by MSD. As depicted in Table 6.7, there are M/WBEs that have the capacity to perform very large purchase orders. Furthermore, there are other methods commonly used by prime contractors, such as subcontracting, joint ventures, and staff augmentation to increase capacity in the presence of contracting opportunities.

**Chart 6.2: Median Purchase Order Value**



***D. Formal Purchase Order Threshold Analysis***

As a further measure to ensure that the available businesses have the capacity to perform the purchase orders analyzed in the disparity analysis, the prime purchase orders subject to the statistical analysis was limited. As discussed in *Chapter 3: Prime Contractor Utilization Analysis*, the analysis of formal purchase orders was limited to the awarded purchase orders with a dollar value below the 89<sup>th</sup> percentile to eliminate outliers, which increased the reliability of the statistical findings and reduced the business capacity requirements. Table 6.8 illustrates the purchase order distribution for each industry by percentile.



**Table 6.8: Threshold Analysis by Size and Industry**

Purchase Order Distribution	All Industries Combined	Construction	Construction-related Services	Engineering and Professional Services	Materials, Commodities and Services
Minimum	\$20,037	\$20,037	\$22,236	\$20,293	\$20,083
25 <sup>th</sup> Percentile	\$36,109	\$35,180	\$45,911	\$41,000	\$27,083
50 <sup>th</sup> Percentile	\$68,496	\$63,963	\$90,869	\$104,325	\$46,826
Mean	\$414,187	\$988,515	\$212,170	\$219,472	\$155,573
75 <sup>th</sup> Percentile	\$207,257	\$261,258	\$250,000	\$247,892	\$110,124
89 <sup>th</sup> Percentile	\$546,000	\$1,710,000	\$500,000	\$460,000	\$350,000
Maximum	\$47,906,892	\$47,906,892	\$1,500,000	\$3,444,710	\$4,262,037

**E. Business Capacity Assessment**

To assess the relative capacity of the M/WBEs and Caucasian male-owned businesses enumerated in the availability analysis, an assessment of socioeconomic factors was administered to the willing businesses using an online survey.

**1. Profile of Respondents**

The business capacity survey was completed by 148 unique businesses: 22.97% were owned by African Americans, 2.70% Asian-Pacific Americans, 2.03% Asian-Indian Americans, 1.35% Native Americans, 10.14% Hispanic Americans, 2.03% by other minorities,<sup>343</sup> and 58.78% Caucasian Americans. Of the 148 surveys, 40.54% were completed by females of all ethnicities and 59.46% were completed by males of all ethnicities.

**Table 6.9: Ethnicity and Gender of Businesses**

Gender	African American	Asian-Pacific American	Asian-Indian American	Native American	Hispanic American	Caucasian American	Other Minorities	Total
<b>Female</b>	4.73%	0.68%	0.00%	0.00%	4.05%	29.73%	1.35%	<b>40.54%</b>
<b>Male</b>	18.24%	2.03%	2.03%	1.35%	6.08%	29.05%	0.68%	<b>59.46%</b>
<b>Total</b>	<b>22.97%</b>	<b>2.70%</b>	<b>2.03%</b>	<b>1.35%</b>	<b>10.14%</b>	<b>58.78%</b>	<b>2.03%</b>	<b>100.00%</b>

Due to the limited number of responses, ethnic groups were combined and analyzed as “minority males” and “minority females.” As shown in Table 6.10, 20.95% of businesses provided construction, 18.92% of businesses provided construction-related services; 37.84% of businesses provided professional services; and 22.30% of businesses provided materials, commodities and services.



<sup>343</sup> Other minorities include individuals who belong to two or more racial groups.

**Table 6.10: Business Owners' Ethnicity, Gender and Primary Industry**

Industry	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
Construction	0.68%	10.81%	6.76%	2.70%	<b>20.95%</b>
Construction-related Services	0.68%	6.08%	6.76%	5.41%	<b>18.92%</b>
Engineering and Professional Services	6.76%	10.81%	10.81%	9.46%	<b>37.84%</b>
Materials, Commodities and Services	2.70%	2.70%	5.41%	11.49%	<b>22.30%</b>
<b>Total</b>	<b>10.81%</b>	<b>30.41%</b>	<b>29.73%</b>	<b>29.05%</b>	<b>100.00%</b>

## 2. Capacity Assessment Findings

Table 6.11 details business annual gross revenue, which shows that 18.92% of business earned less than \$50,000; 16.89% of businesses earned \$50,001 to \$100,000; 6.76% of businesses earned \$100,001 to \$300,000; 8.78% of businesses earned \$300,001 to \$500,000; 13.51% of businesses earned \$500,001 to \$1,000,000; 4.73% of businesses earned \$1,000,001 to \$3,000,000; 8.11% of businesses earned \$3,000,001 to \$5,000,000; 6.08% of businesses earned \$5,000,001 to \$10,000,000; 11.49% of businesses earned over \$10 million; and 4.73% of respondents did not provide their annual revenue range.

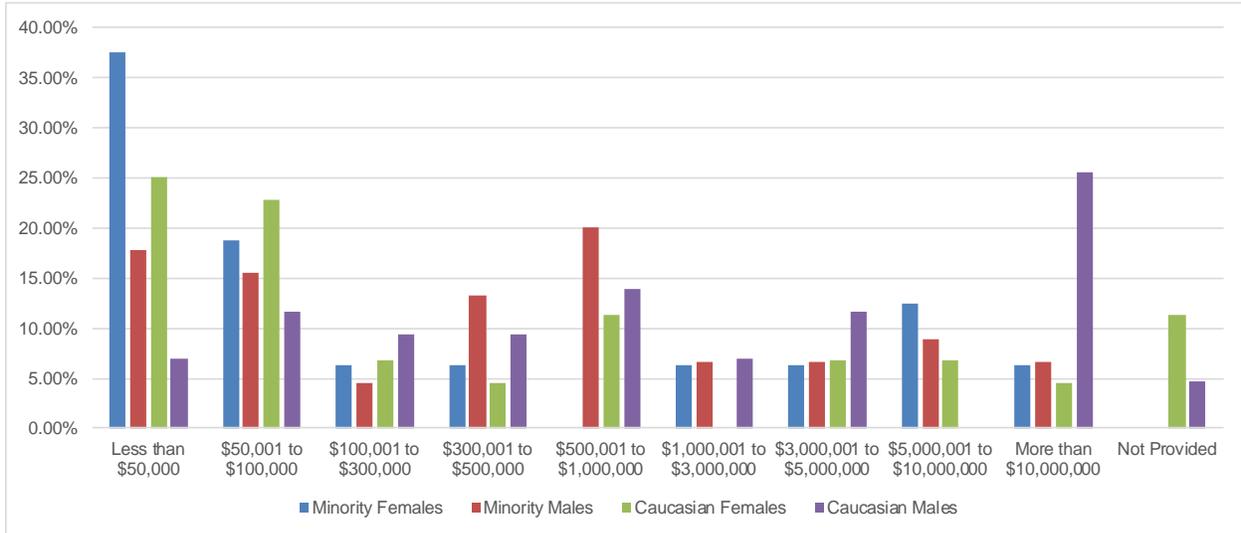
**Table 6.11: Annual Gross Revenue**

Revenue	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
Less than \$50,000	37.50%	17.78%	25.00%	6.98%	<b>18.92%</b>
\$50,001 to \$100,000	18.75%	15.56%	22.73%	11.63%	<b>16.89%</b>
\$100,001 to \$300,000	6.25%	4.44%	6.82%	9.30%	<b>6.76%</b>
\$300,001 to \$500,000	6.25%	13.33%	4.55%	9.30%	<b>8.78%</b>
\$500,001 to \$1,000,000	0.00%	20.00%	11.36%	13.95%	<b>13.51%</b>
\$1,000,001 to \$3,000,000	6.25%	6.67%	0.00%	6.98%	<b>4.73%</b>
\$3,000,001 to \$5,000,000	6.25%	6.67%	6.82%	11.63%	<b>8.11%</b>
\$5,000,001 to \$10,000,000	12.50%	8.89%	6.82%	0.00%	<b>6.08%</b>
More than \$10,000,000	6.25%	6.67%	4.55%	25.58%	<b>11.49%</b>
Not Provided	0.00%	0.00%	11.36%	4.65%	<b>4.73%</b>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Chart 6.3 illustrates that minority female, minority male, Caucasian female, and Caucasian male revenue is most similar at the \$50,000 to \$100,000 level. This finding implies that the majority of businesses are small, regardless of the ethnicity and gender of the owner.



**Chart 6.3: Annual Gross Revenue**



As shown in Table 6.12, 33.11% of business had 0 to 5 employees,<sup>344</sup> 11.49% had 6 to 10 employees, 10.14% had 11 to 20 employees, 8.78% had 21 to 30 employees, 22.97% had 31 to 50 employees, 12.84% had more than 50 employees; and 0.68% of the respondents did not provide a count of employees.

**Table 6.12: Number of Employees**

Employees	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
<b>0 to 5 Employees</b>	37.50%	22.22%	38.64%	37.21%	<b>33.11%</b>
<b>6 to 10 Employees</b>	25.00%	4.44%	15.91%	9.30%	<b>11.49%</b>
<b>11 to 20 Employees</b>	0.00%	13.33%	11.36%	9.30%	<b>10.14%</b>
<b>21 to 30 Employees</b>	0.00%	15.56%	0.00%	13.95%	<b>8.78%</b>
<b>31-50 Employees</b>	25.00%	37.78%	20.45%	9.30%	<b>22.97%</b>
<b>Over 50 Employees</b>	6.25%	6.67%	13.64%	20.93%	<b>12.84%</b>
<b>Not Provided</b>	6.25%	0.00%	0.00%	0.00%	<b>0.68%</b>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

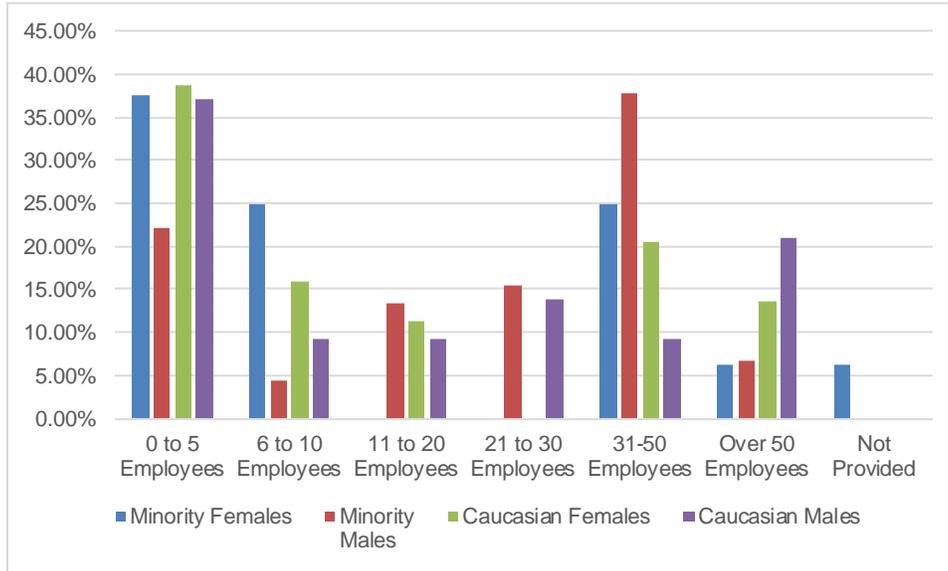
Chart 6.4 illustrates that most businesses are small, including both M/WBEs and Caucasian male-owned businesses. As reported in the e-Survey, 54.73% of all businesses are small, employing 20 or fewer persons. While the responding businesses were small, they were larger than the average business in MSD’s market area, as reported by the United States Census Survey of Business Owners. The Census reports that 81.10% of businesses in Jefferson County employ 20 or fewer persons.<sup>345</sup>



<sup>344</sup> Business owners are not counted as employees.

<sup>345</sup> United States Census Bureau, 2007 Survey of Business Owners.

**Chart 6.4: Number of Employees**



One consideration of capacity, as discussed in the case law, is the ability to bid and perform multiple contracts.<sup>346</sup> This factor relates to the human resources and capital resources available to perform multiple contracts concurrently.

**Table 6.13: Percent of Bonded Businesses**

Bonded	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
Yes	6.67%	52.27%	36.36%	51.22%	42.36%
No	93.33%	47.73%	63.64%	48.78%	57.64%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

As shown in Table 6.13, 42.36% of businesses are bonded, and 57.64% are not bonded.



<sup>346</sup> See *Rothe Development Corporation v. U.S. Department of Defense*, 262 F.3d 1306 (Fed. Cir. 2001); see also *Rothe Development Corporation v. U.S. Department of Defense*, 545 F.3d 1023 (Fed. Cir. 2008).

**Table 6.14: Percentage of Bonding Limit Amount**

<b>Bonding Amount</b>	<b>Minority Females</b>	<b>Minority Males</b>	<b>Caucasian Females</b>	<b>Caucasian Males</b>	<b>Total</b>
<b>Less than \$50,000</b>	100.00%	4.35%	6.25%	0.00%	5.00%
<b>\$50,000 to \$100,000</b>	0.00%	4.35%	0.00%	0.00%	1.67%
<b>\$100,001 to \$150,000</b>	0.00%	4.35%	0.00%	0.00%	1.67%
<b>\$150,001 to \$500,000</b>	0.00%	8.70%	25.00%	15.00%	15.00%
<b>\$500,001 to \$1,000,000</b>	0.00%	13.04%	18.75%	25.00%	18.33%
<b>\$1,000,001 to \$5,000,000</b>	0.00%	47.83%	43.75%	45.00%	45.00%
<b>\$5,000,001 to \$10,000,000</b>	0.00%	0.00%	0.00%	0.00%	0.00%
<b>More than \$10,000,000</b>	0.00%	17.39%	6.25%	15.00%	13.33%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

As shown in Table 6.14, 5.00% of business had less than a \$50,000 bonding limit, 1.67% had a limit between \$50,000 and \$100,000, 1.67% had a limit between \$100,001 and \$150,000, 15.00% had a limit between \$150,001-\$500,000, 18.33% had a limit between \$500,001-\$1,000,000, 45.00% had a limit between \$1,000,001 and \$5,000,000, none had a limit between \$5,000,001 and \$10,000,000, and 13.33% had a bonding limit greater than \$10,000,000.

Table 6.15 illustrates that most businesses, including M/WBEs and Caucasian male-owned businesses, performed multiple concurrent purchase orders within the previous calendar year. Only 4.05% of businesses reported performing a single public or private purchase order.

**Table 6.15: Percent of Annual Purchase Orders**

<b>Purchase Orders</b>	<b>Minority Females</b>	<b>Minority Males</b>	<b>Caucasian Females</b>	<b>Caucasian Males</b>	<b>Total</b>
<b>1 Purchase Orders</b>	0.00%	6.67%	2.27%	4.65%	<b>4.05%</b>
<b>2-5 Purchase Orders</b>	12.50%	2.22%	11.36%	2.33%	<b>6.08%</b>
<b>6-10 Purchase Orders</b>	37.50%	17.78%	13.64%	9.30%	<b>16.22%</b>
<b>11-20 Purchase Orders</b>	18.75%	13.33%	9.09%	4.65%	<b>10.14%</b>
<b>More than 20 Purchase Orders</b>	25.00%	35.56%	43.18%	39.53%	<b>37.84%</b>
<b>Not Applicable</b>	6.25%	20.00%	13.64%	34.88%	<b>20.95%</b>
<b>Not Provided</b>	0.00%	4.44%	6.82%	4.65%	<b>4.73%</b>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Chart 6.5 illustrates that most businesses, including M/WBEs and Caucasian male-owned businesses, performed six to 10 purchase orders, illustrating that both M/WBEs and Caucasian male-owned businesses have successfully performed multiple purchase orders concurrently.



**Chart 6.5: Number of Purchase Orders**

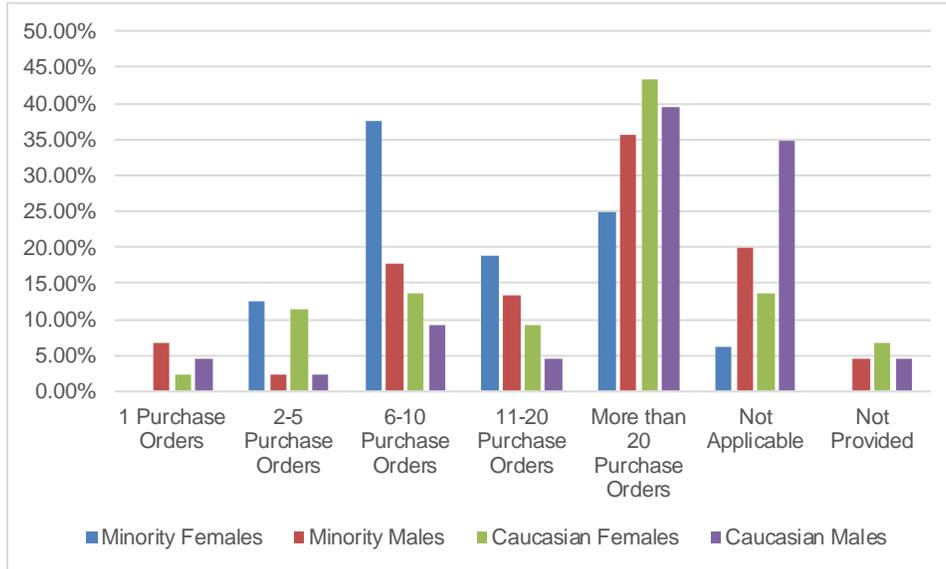


Table 6.16 shows that the majority of businesses are 11 to 20 years old, illustrating that there are mature M/WBEs within the pool of available businesses, though no minority female-owned and only 2.22% of minority male-owned businesses are 50 years or older. This finding is consistent with the passage of anti-discrimination legislation, beginning with the Civil Rights Act of 1964, which spawned the 1971 Executive Order 11625. This early legislation applied to federally funded contracts and minimally affected local laws. Local government affirmative action policies were not accelerated until the promulgation of the United States Department of Transportation (USDOT) Disadvantaged Business Enterprise (DBE) regulations in 1983. The DBE regulations required states, counties, cities, and transportation agencies to implement affirmative action contracting programs as a condition of USDOT funding.

**Table 6.16: Years in Business Operation**

Years in Operation	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
Less than 5 years	6.25%	15.56%	11.36%	4.65%	10.14%
6 -10 years	18.75%	15.56%	11.36%	20.93%	16.22%
11 - 20 years	37.50%	35.56%	29.55%	11.63%	27.03%
21 - 30 years	6.25%	17.78%	15.91%	11.63%	14.19%
31 - 50 years	25.00%	13.33%	9.09%	27.91%	17.57%
More than 50 years	0.00%	2.22%	18.18%	23.26%	12.84%
Not Provided	6.25%	0.00%	4.55%	0.00%	2.03%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



Chart 6.6 also illustrates that M/WBEs are a growing group of entrepreneurs that includes mature M/WBEs with significant experience in their respective fields.

**Chart 6.6: Years in Operation**

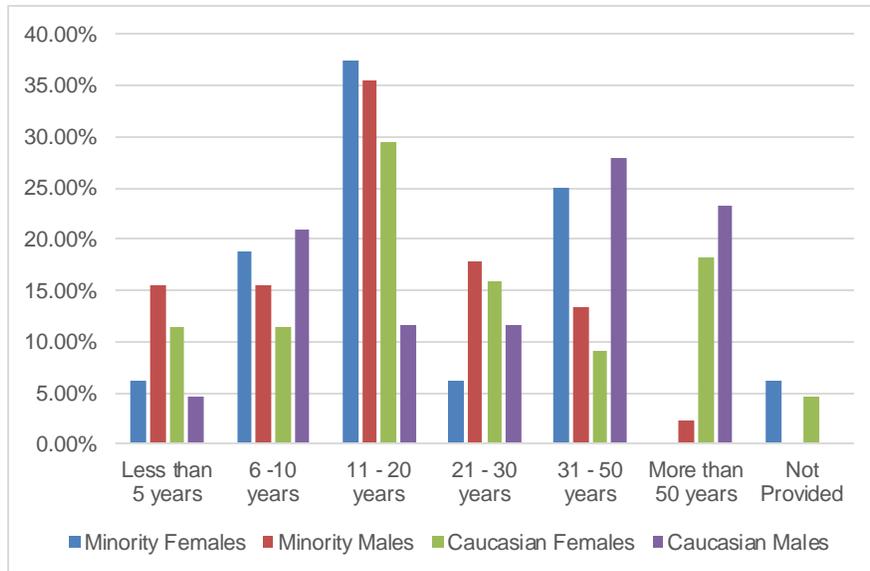


Table 6.17 shows that 60.81% of business owners have a bachelor’s degree or higher and, within this pool, minority males obtained graduate and professional degrees at a higher frequency than Caucasian males. Yet Caucasian male-owned businesses received most of MSD’s purchase orders, as detailed in *Chapter 3: Prime Contractor Utilization Analysis* and *Chapter 4: Subcontractor Utilization Analysis*.

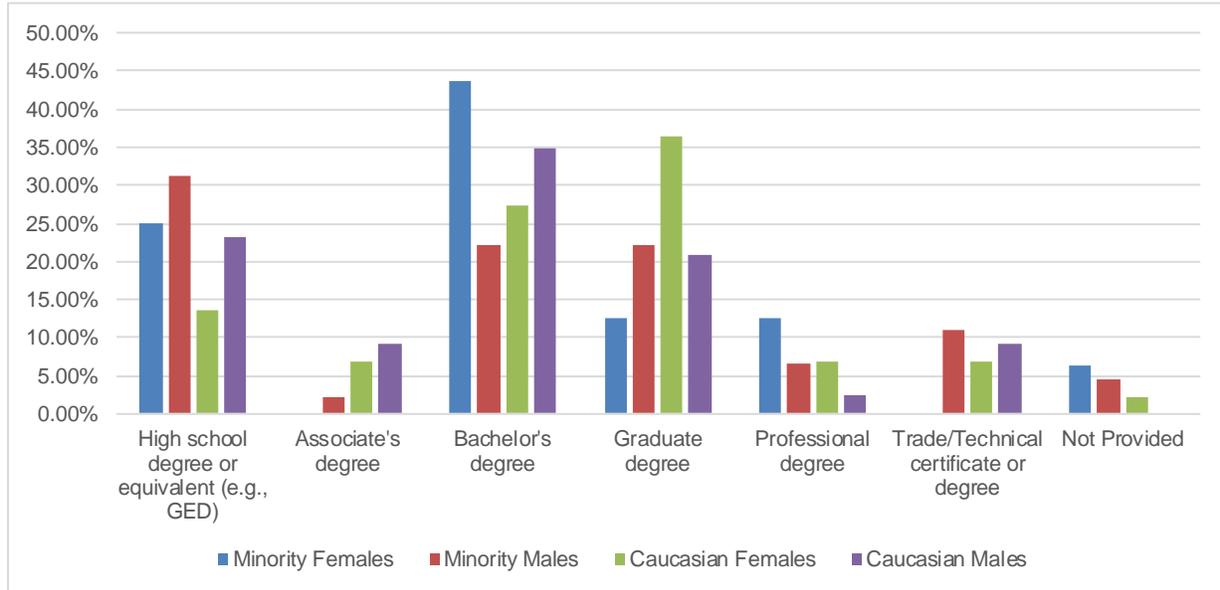
**Table 6.17: Education Level of Business Owners**

Education	Minority Females	Minority Males	Caucasian Females	Caucasian Males	Total
High school degree or equivalent (e.g., GED)	25.00%	31.11%	13.64%	23.26%	<b>22.97%</b>
Associate's degree	0.00%	2.22%	6.82%	9.30%	<b>5.41%</b>
Bachelor's degree	43.75%	22.22%	27.27%	34.88%	<b>29.73%</b>
Graduate degree	12.50%	22.22%	36.36%	20.93%	<b>25.00%</b>
Professional degree	12.50%	6.67%	6.82%	2.33%	<b>6.08%</b>
Trade/Technical certificate or degree	0.00%	11.11%	6.82%	9.30%	<b>8.11%</b>
Not Provided	6.25%	4.44%	2.27%	0.00%	<b>2.70%</b>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Chart 6.7 illustrates that most business owners have a bachelor’s degree or higher. However, of note is that both Caucasian males and minority males are the majority of business owners with a high school degree only.



**Chart 6.7: Educational Attainment**



**F. Online Survey Findings**

The analysis shows that among similarly situated M/WBEs and Caucasian male-owned businesses, the relative capacity of firms is comparable. Most businesses enumerated in the availability analysis, including M/WBEs and Caucasian male-owned businesses, have the following profile:

- Employ five or fewer persons
- Performed over 20 public and private purchase orders annually
- Have gross revenue of \$500,000 or less
- Operated their business for 11 to 20 years
- Have a bachelor’s degree

Considering the metrics reviewed in this analysis, Caucasian males are not awarded more purchase orders because of any single socioeconomic factor or combination of measures. The fact that Caucasian males are awarded more purchase orders is more likely a function of discrimination in public and private sector business practices. The results of this survey are evidence that willing M/WBEs have demonstrated capacity comparable to Caucasian male-owned businesses.



## ***IV. Prime Contractor Availability Analysis***

The size of MSD's purchase orders demonstrates that the majority are small, requiring limited capacity to perform. Furthermore, the awards MSD has made to M/WBEs demonstrate that the capacity of the available businesses is considerably greater than needed to bid on the majority of the purchase orders awarded in the four industries studied. Nevertheless, as noted in *Chapter 3: Prime Contractor Utilization Analysis*, the decision was made to limit the prime purchase orders subject to the disparity analysis to those valued \$20,001 to \$1,710,000 for construction purchase orders, \$20,001 to \$500,000 for construction-related services purchase orders, \$20,001 to \$460,000 for engineering and professional services purchase orders, and \$20,001 to \$350,000 for materials, commodities and services purchase orders.

### ***A. Construction Prime Contractor Availability***

Presented below is a summary of the distribution of available construction prime contractors shown in Table 6.18.

*African Americans* account for 30.37% of the construction prime contractors in MSD's market area.

*Asian-Pacific Americans* account for 2.62% of the construction prime contractors in MSD's market area.

*Asian-Indian Americans* account for 1.57% of the construction prime contractors in MSD's market area.

*Hispanic Americans* account for 3.66% of the construction prime contractors in MSD's market area.

*Native Americans* account for 1.05% of the construction prime contractors in MSD's market area.

*Caucasian Females* account for 18.32% of the construction prime contractors in MSD's market area.

*Non-minority Males* account for 42.41% of the construction prime contractors in MSD's market area.



**Table 6.18: Available Construction Prime Contractors,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Percent of Businesses</b>
African Americans	30.37%
Asian-Pacific Americans	2.62%
Asian-Indian Americans	1.57%
Hispanic Americans	3.66%
Native Americans	1.05%
Caucasian Females	18.32%
Non-minority Males	42.41%
TOTAL	100.00%
<b>Ethnicity and Gender</b>	<b>Percent of Businesses</b>
African American Females	5.76%
African American Males	24.61%
Asian-Pacific American Females	1.05%
Asian-Pacific American Males	1.57%
Asian-Indian American Females	0.00%
Asian-Indian American Males	1.57%
Hispanic American Females	0.52%
Hispanic American Males	3.14%
Native American Females	0.00%
Native American Males	1.05%
Caucasian Females	18.32%
Non-minority Males	42.41%
TOTAL	100.00%



## **B. Construction-related Services Prime Contractor Availability**

Presented below is a summary of the distribution of available construction-related services prime contractors shown in Table 6.19.

*African Americans* account for 22.47% of the construction-related services prime contractors in MSD's market area.

*Asian-Pacific Americans* account for 0.56% of the construction-related services prime contractors in MSD's market area.

*Asian-Indian Americans* account for 0.56% of the construction-related services prime contractors in MSD's market area.

*Hispanic Americans* account for 2.81% of the construction-related services prime contractors in MSD's market area.

*Native Americans* account for 0.56% of the construction-related services prime contractors in MSD's market area.

*Caucasian Females* account for 21.91% of the construction-related services prime contractors in MSD's market area.

*Non-minority Males* account for 51.12% of the construction-related services prime contractors in MSD's market area.



**Table 6.19: Available Construction-related Services Prime Contractors,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Percent of Businesses</b>
African Americans	22.47%
Asian-Pacific Americans	0.56%
Asian-Indian Americans	0.56%
Hispanic Americans	2.81%
Native Americans	0.56%
Caucasian Females	21.91%
Non-minority Males	51.12%
TOTAL	100.00%
<b>Ethnicity and Gender</b>	<b>Percent of Businesses</b>
African American Females	3.37%
African American Males	19.10%
Asian-Pacific American Females	0.00%
Asian-Pacific American Males	0.56%
Asian-Indian American Females	0.00%
Asian-Indian American Males	0.56%
Hispanic American Females	1.12%
Hispanic American Males	1.69%
Native American Females	0.00%
Native American Males	0.56%
Caucasian Females	21.91%
Non-minority Males	51.12%
TOTAL	100.00%



### **C. Engineering and Professional Services Prime Contractor Availability**

Presented below is a summary of the distribution of available engineering and professional services prime contractors shown Table 6.20.

*African Americans* account for 13.33% of the engineering and professional services prime contractors in MSD's market area.

*Asian-Pacific Americans* account for 1.33% of the engineering and professional services prime contractors in MSD's market area.

*Asian-Indian Americans* account for 3.11% of the engineering and professional services prime contractors in MSD's market area.

*Hispanic Americans* account for 4.44% of the engineering and professional services prime contractors in MSD's market area.

*Native Americans* account for 0.44% of the engineering and professional services prime contractors in MSD's market area.

*Caucasian Females* account for 25.33% of the engineering and professional services prime contractors in MSD's market area.

*Non-minority Males* account for 52.00% of the engineering and professional services prime contractors in MSD's market area.



**Table 6.20: Available Engineering and Professional Services Prime Contractors,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Percent of Businesses</b>
African Americans	13.33%
Asian-Pacific Americans	1.33%
Asian-Indian Americans	3.11%
Hispanic Americans	4.44%
Native Americans	0.44%
Caucasian Females	25.33%
Non-minority Males	52.00%
TOTAL	100.00%
<b>Ethnicity and Gender</b>	<b>Percent of Businesses</b>
African American Females	4.44%
African American Males	8.89%
Asian-Pacific American Females	0.00%
Asian-Pacific American Males	1.33%
Asian-Indian American Females	0.00%
Asian-Indian American Males	3.11%
Hispanic American Females	0.89%
Hispanic American Males	3.56%
Native American Females	0.44%
Native American Males	0.00%
Caucasian Females	25.33%
Non-minority Males	52.00%
TOTAL	100.00%



**D. Materials, Commodities and Services Prime Contractor Availability**

Presented below is a summary of the distribution of available materials, commodities and services prime contractors shown in Table 6.21.

*African Americans* account for 10.14% of the materials, commodities and services prime contractors in MSD's market area.

*Asian-Pacific Americans* account for 1.09% of the materials, commodities and services prime contractors in MSD's market area.

*Asian-Indian Americans* account for 0.36% of the materials, commodities and services prime contractors in MSD's market area.

*Hispanic Americans* account for 1.09% of the materials, commodities and services prime contractors in MSD's market area.

*Native Americans* account for 0.36% of the materials, commodities and services prime contractors in MSD's market area.

*Caucasian Females* account for 19.93% of the materials, commodities and services prime contractors in MSD's market area.

*Non-minority Males* account for 67.03% of the materials, commodities and services prime contractors in MSD's market area.



**Table 6.21: Available Materials, Commodities and Services Prime Contractors,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Percent of Businesses</b>
African Americans	10.14%
Asian-Pacific Americans	1.09%
Asian-Indian Americans	0.36%
Hispanic Americans	1.09%
Native Americans	0.36%
Caucasian Females	19.93%
Non-minority Males	67.03%
TOTAL	100.00%
<b>Ethnicity and Gender</b>	<b>Percent of Businesses</b>
African American Females	2.54%
African American Males	7.61%
Asian-Pacific American Females	0.72%
Asian-Pacific American Males	0.36%
Asian-Indian American Females	0.00%
Asian-Indian American Males	0.36%
Hispanic American Females	0.00%
Hispanic American Males	1.09%
Native American Females	0.00%
Native American Males	0.36%
Caucasian Females	19.93%
Non-minority Males	67.03%
TOTAL	100.00%



## V. ***Subcontractor Availability Analysis***

### A. ***Source of Willing and Able Subcontractors***

All available prime contractors were included in the calculation of subcontractor availability. Additional subcontractors in the City’s market area were identified using the source listed in Table 6.22. Subcontractor availability was not calculated for the engineering and professional services industry and goods and other services industry because subcontracting activity in those industries is limited.

**Table 6.22: Unique Subcontractor Availability Data Source**

Type of Record	Type of Information
Subcontract Awards Provided by MSD	M/WBEs and Non-M/WBEs

### B. ***Determination of Willingness and Capacity***

Subcontractor availability was limited to the utilized prime contractors and the unique businesses utilized as subcontractors. Therefore, the determination of willingness and capacity was achieved. Furthermore, *Croscon* does not require a separate measure of subcontractor capacity in the analysis of subcontractor availability.



### **C. Construction Subcontractor Availability**

Presented below is a summary of the distribution of available construction subcontractors shown in Table 6.23.

*African Americans* account for 18.23% of the construction subcontractors in MSD's market area.

*Asian-Pacific Americans* account for 1.42% of the construction subcontractors in MSD's market area.

*Asian-Indian Americans* account for 1.99% of the construction subcontractors in MSD's market area.

*Hispanic Americans* account for 1.99% of the construction subcontractors in MSD's market area.

*Native Americans* account for 0.57% of the construction subcontractors in MSD's market area.

*Caucasian Females* account for 14.81% of the construction subcontractors in MSD's market area.

*Non-minority Males* account for 60.97% of the construction subcontractors in MSD's market area.



**Table 6.23: Available Construction Subcontractors,  
July 1, 2010, to June 30, 2015**

<b>Group</b>	<b>Percent of Businesses</b>
African Americans	18.23%
Asian-Pacific Americans	1.42%
Asian-Indian Americans	1.99%
Hispanic Americans	1.99%
Native Americans	0.57%
Caucasian Females	14.81%
Non minority Males	60.97%
TOTAL	100.00%
<b>Ethnicity and Gender</b>	<b>Percent of Businesses</b>
African American Females	3.99%
African American Males	14.25%
Asian-Pacific American Females	0.57%
Asian-Pacific American Males	0.85%
Asian-Indian American Females	0.00%
Asian-Indian American Males	1.99%
Hispanic American Females	0.28%
Hispanic American Males	1.71%
Native American Females	0.00%
Native American Males	0.57%
Caucasian Females	14.81%
Non minority Males	60.97%
TOTAL	100.00%



## **VI. Summary**

This chapter provided the availability analysis for MSD's market area. Mason Tillman identified a total of 768 unique businesses that can provide goods and services in one or more of the four industries being studied.

Prime contractor availability was analyzed by ethnicity and gender. Minority-owned businesses account for 24.22% of prime contractors within the four industries, Caucasian female-owned businesses account for 21.48% of prime contractors; and non-minority male-owned businesses account for 54.30% of prime contractors.

Minority-owned businesses account for 23.56% of subcontractors within the construction industry, Caucasian female-owned businesses account for 18.52% of subcontractors, and non-minority male-owned businesses account for 57.93% of subcontractors.



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# CHAPTER 7: Prime Contract Disparity Analysis

## I. Introduction

The objective of this disparity analysis is to determine the levels at which minority and woman-owned business enterprises (M/WBEs) are utilized on Louisville and Jefferson County Metropolitan Sewer District (MSD) prime purchase orders.<sup>347</sup> Under a fair and equitable system of awarding prime purchase orders, the proportion of prime purchase order dollars awarded to M/WBEs should be relatively close to the proportion of available M/WBEs in the relevant market area.<sup>348</sup> If the ratio of M/WBEs utilized on prime purchase orders to available M/WBE prime contractors is less than one-to-one, a statistical test is conducted to calculate the probability of observing the empirical disparity ratio or any event that is less probable. This analysis assumes a fair and equitable system.<sup>349</sup> *Croson* states that an inference of discrimination can be made *prima facie* if the disparity is statistically significant. Under the *Croson* model, utilization of non-minority male-owned business enterprises (non-M/WBEs) are not subjected to a statistical test.

The first step in conducting the statistical test is to calculate the purchase order value that each ethnic and gender group is expected to receive. This value is based on each group's availability in the market area and shall be referred to as the **expected purchase order amount**. The next step computes the difference between each ethnic and gender group's expected purchase order amount and the **actual purchase order amount** received by each group. The **disparity ratio** is then computed by dividing the actual purchase order amount by the expected purchase order amount.

For parametric and non-parametric analyses, the p-value takes into account the number of purchase orders, amount of purchase order dollars, and variation in purchase order dollars. If the difference between the actual and expected number of purchase orders and total purchase order dollars has a p-value less than or equal to 0.05, the difference is statistically significant.<sup>350</sup>

In the simulation analysis, the p-value takes into account a combination of the distribution formulated from the empirical data and the purchase order dollar amounts or purchase order rank. If the actual purchase order dollar amount or actual purchase order rank falls below the fifth percentile of the distribution, it denotes a p-value less than 0.05, which is statistically significant. Our statistical model employs all three methods simultaneously to each industry. Findings from

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<sup>347</sup> Women Business Enterprises is also referred to as Caucasian females.

<sup>348</sup> Availability is defined as the number of ready, willing, and able firms. The methodology for determining willing and able firms is detailed in *Chapter 6: Prime Contractor and Subcontractor Availability Analysis*.

<sup>349</sup> When conducting statistical tests, a confidence level must be established as a gauge for the level of certainty that an observed occurrence is not due to chance. It is important to note that a 100-percent confidence level or a level of absolute certainty can never be obtained in statistics. A 95-percent confidence level is the standard in physical and social sciences to determine statistical significance and is thus used in this report to determine an inference of discrimination.

<sup>350</sup> A statistical test is not performed for underutilization of non-minority males or when the ratio of utilized to available is greater than one for M/WBEs.



one of the three methods are reported. If the p-value from any one of the three methods is less than 0.05, the finding is reported in the disparity tables as statistically significant. If the p-value is greater than 0.05, the finding is reported as not statistically significant.

## **II. Disparity Analysis**

A disparity analysis was performed on MSD’s prime purchase orders awarded in the construction, construction-related services, engineering and professional services, and materials, commodities and services industries during the July 1, 2010, to June 30, 2015, study period. A separate analysis was performed for informal purchase orders valued \$10,001 to \$20,000 and formal purchase orders within the thresholds that were established for each industry using a statistical analysis.

As discussed in *Chapter 3: Prime Contractor Utilization Analysis*, a statistical analysis identified outliers that would skew the disparity analysis. The outliers were removed when the thresholds were set. Consequently, the purchase orders included in the disparity analysis were limited by dollar value to those beneath the 89<sup>th</sup> percentile of the purchase orders awarded by MSD in each of the four industries.

The application of the thresholds for each industry ensures that purchase orders that are outliers in size do not skew the results of the disparity analysis. Additionally, the thresholds mirror the capacity of the businesses enumerated in the availability analysis. The thresholds for the disparity analysis are listed by industry in Table 7.1.

**Table 7.1: Thresholds for Analysis by Industry**

<b>Industry</b>	<b>Formal Threshold Amount</b>
Construction	\$20,001 to \$1,710,000
Construction-related Services	\$20,001 to \$500,000
Engineering and Professional Services	\$20,001 to \$460,000
Materials, Commodities and Services	\$20,001 to \$350,000

The findings from the three methods employed to calculate statistical significance of the underutilization of M/WBEs in each industry, as discussed on page 7-1, are presented in the subsequent sections. The outcomes of the statistical analyses are presented in the “P-Value” column of the tables. A description of these statistical outcomes, as shown in the disparity tables, is presented in Table 7.2.



**Table 7.2: Statistical Outcome Descriptions**

<b>P-Value Outcome</b>	<b>Definition of P-Value Outcome</b>
< .05 *	This underutilization is statistically significant.
not significant	<ul style="list-style-type: none"> <li>• M/WBEs: This underutilization is not statistically significant.</li> <li>• Non-minority males: This overutilization is not statistically significant.</li> </ul>
< .05 †	This overutilization is statistically significant.
----	While this group was underutilized, there were too few available firms to determine statistical significance.
**	This Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.



**A. Disparity Analysis: Informal Prime Purchase Orders, by Industry**

**1. Construction Prime Purchase Orders Valued \$10,001 to \$20,000**

The disparity analysis of construction prime purchase orders valued \$10,001 to \$20,000 is described below and depicted in Table 7.3 and Chart 7.1.

*African Americans* represent 30.37% of the available construction businesses and received 11.96% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 2.62% of the available construction businesses and received 9.80% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Asian-Indian Americans* represent 1.57% of the available construction businesses and received 0.00% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This underutilization is not statistically significant.

*Hispanic Americans* represent 3.66% of the available construction businesses and received 0.72% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Native Americans* represent 1.05% of the available construction businesses and received 5.41% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Caucasian Females* represent 18.32% of the available construction businesses and received 3.43% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Non-minority Males* represent 42.41% of the available construction businesses and received 68.68% of the dollars on construction purchase orders valued \$10,001 to \$20,000. This overutilization is statistically significant.



**Table 7.3: Disparity Analysis: Construction Prime Purchase Orders Valued \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$289,458	11.96%	30.37%	\$735,243	-\$445,785	0.39	< .05 *
Asian-Pacific Americans	\$237,194	9.80%	2.62%	\$63,383	\$173,811	3.74	**
Asian-Indian Americans	\$0	0.00%	1.57%	\$38,030	-\$38,030	0.00	not significant
Hispanic Americans	\$17,500	0.72%	3.66%	\$88,736	-\$71,236	0.20	< .05 *
Native Americans	\$131,081	5.41%	1.05%	\$25,353	\$105,728	5.17	**
Caucasian Females	\$83,160	3.43%	18.32%	\$443,681	-\$360,521	0.19	< .05 *
Non-minority Males	\$1,662,839	68.68%	42.41%	\$1,026,805	\$636,033	1.62	< .05 †
<b>TOTAL</b>	<b>\$2,421,232</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$2,421,232</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$0	0.00%	5.76%	\$139,443	-\$139,443	0.00	< .05 *
African American Males	\$289,458	11.96%	24.61%	\$595,801	-\$306,342	0.49	< .05 *
Asian-Pacific American Females	\$0	0.00%	1.05%	\$25,353	-\$25,353	0.00	not significant
Asian-Pacific American Males	\$237,194	9.80%	1.57%	\$38,030	\$199,164	6.24	**
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$0	0.00%	1.57%	\$38,030	-\$38,030	0.00	not significant
Hispanic American Females	\$0	0.00%	0.52%	\$12,677	-\$12,677	0.00	----
Hispanic American Males	\$17,500	0.72%	3.14%	\$76,060	-\$58,560	0.23	< .05 *
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$131,081	5.41%	1.05%	\$25,353	\$105,728	5.17	**
Caucasian Females	\$83,160	3.43%	18.32%	\$443,681	-\$360,521	0.19	< .05 *
Non-minority Males	\$1,662,839	68.68%	42.41%	\$1,026,805	\$636,033	1.62	< .05 †
<b>TOTAL</b>	<b>\$2,421,232</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$2,421,232</b>			

(\*) denotes a statistically significant underutilization.

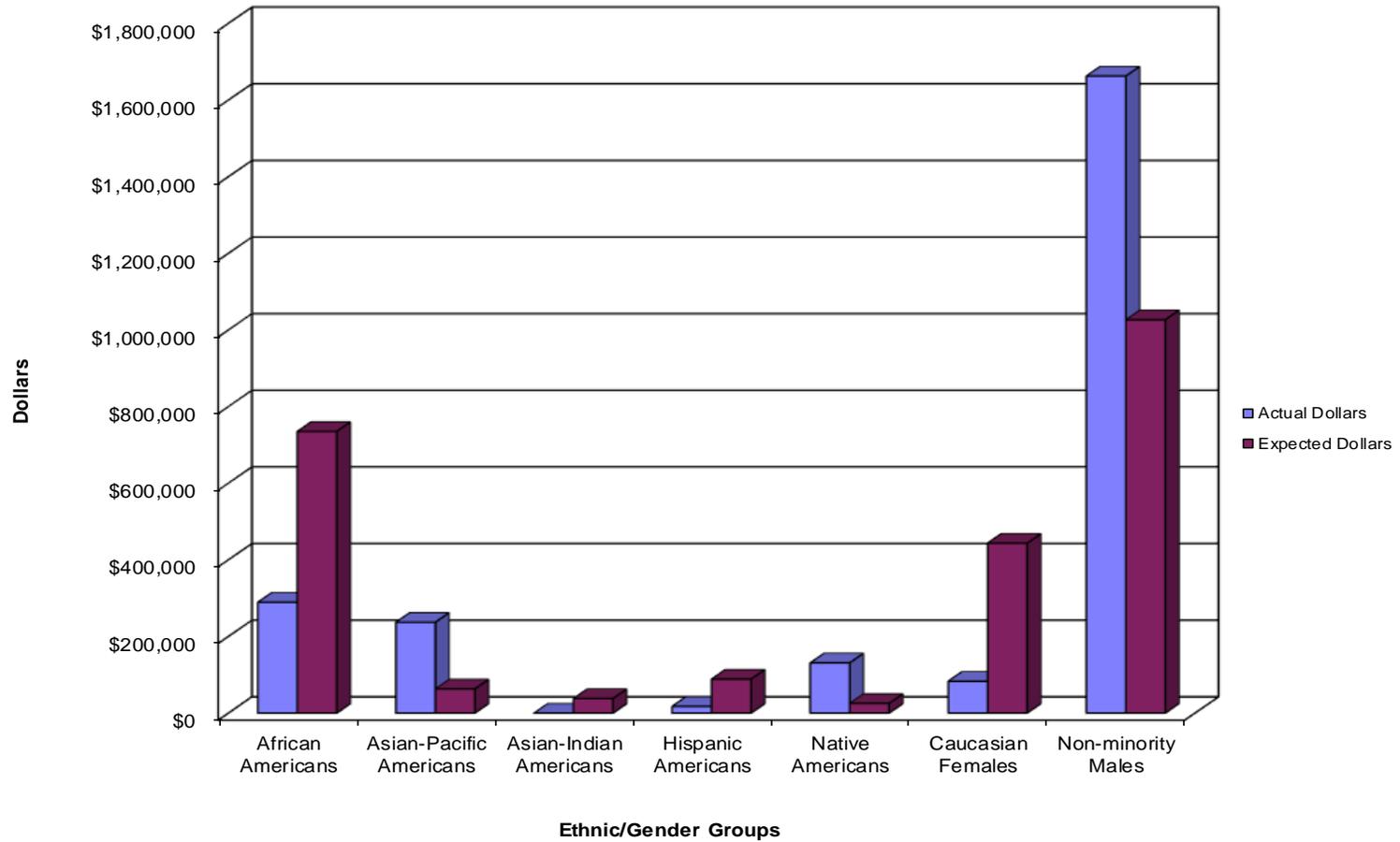
(†) denotes a statistically significant overutilization.

(\*\*) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

(----) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.1: Disparity Analysis: Construction Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**



## 2. Construction-related Services Prime Purchase Orders Valued \$10,001 to \$20,000

The disparity analysis of construction-related services prime purchase orders valued \$10,001 to \$20,000 is described below and depicted in Table 7.4 and Chart 7.2.

*African Americans* represent 22.47% of the available construction-related services businesses and received 3.52% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 0.56% of the available construction-related services businesses and received 0.00% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Asian-Indian Americans* represent 0.56% of the available construction-related services businesses and received 0.00% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Hispanic Americans* represent 2.81% of the available construction-related services businesses and received 0.00% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Native Americans* represent 0.56% of the available construction-related services businesses and received 7.30% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Caucasian Females* represent 21.91% of the available construction-related services businesses and received 27.85% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Non-minority Males* represent 51.12% of the available construction-related services businesses and received 61.33% of the dollars on construction-related services purchase orders valued \$10,001 to \$20,000. This overutilization is statistically significant.



**Table 7.4: Disparity Analysis: Construction-related Services Prime Purchase Orders Valued \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$68,232	3.52%	22.47%	\$435,572	-\$367,340	0.16	< .05 *
Asian-Pacific Americans	\$0	0.00%	0.56%	\$10,889	-\$10,889	0.00	----
Asian-Indian Americans	\$0	0.00%	0.56%	\$10,889	-\$10,889	0.00	----
Hispanic Americans	\$0	0.00%	2.81%	\$54,447	-\$54,447	0.00	< .05 *
Native Americans	\$141,588	7.30%	0.56%	\$10,889	\$130,698	13.00	**
Caucasian Females	\$539,769	27.85%	21.91%	\$424,683	\$115,086	1.27	**
Non-minority Males	\$1,188,709	61.33%	51.12%	\$990,927	\$197,781	1.20	< .05 †
<b>TOTAL</b>	<b>\$1,938,297</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$1,938,297</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$10,016	0.52%	3.37%	\$65,336	-\$55,320	0.15	< .05 *
African American Males	\$58,216	3.00%	19.10%	\$370,237	-\$312,020	0.16	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Pacific American Males	\$0	0.00%	0.56%	\$10,889	-\$10,889	0.00	----
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$0	0.00%	0.56%	\$10,889	-\$10,889	0.00	----
Hispanic American Females	\$0	0.00%	1.12%	\$21,779	-\$21,779	0.00	not significant
Hispanic American Males	\$0	0.00%	1.69%	\$32,668	-\$32,668	0.00	not significant
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$141,588	7.30%	0.56%	\$10,889	\$130,698	13.00	**
Caucasian Females	\$539,769	27.85%	21.91%	\$424,683	\$115,086	1.27	**
Non-minority Males	\$1,188,709	61.33%	51.12%	\$990,927	\$197,781	1.20	< .05 †
<b>TOTAL</b>	<b>\$1,938,297</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$1,938,297</b>			

( \*) denotes a statistically significant underutilization.

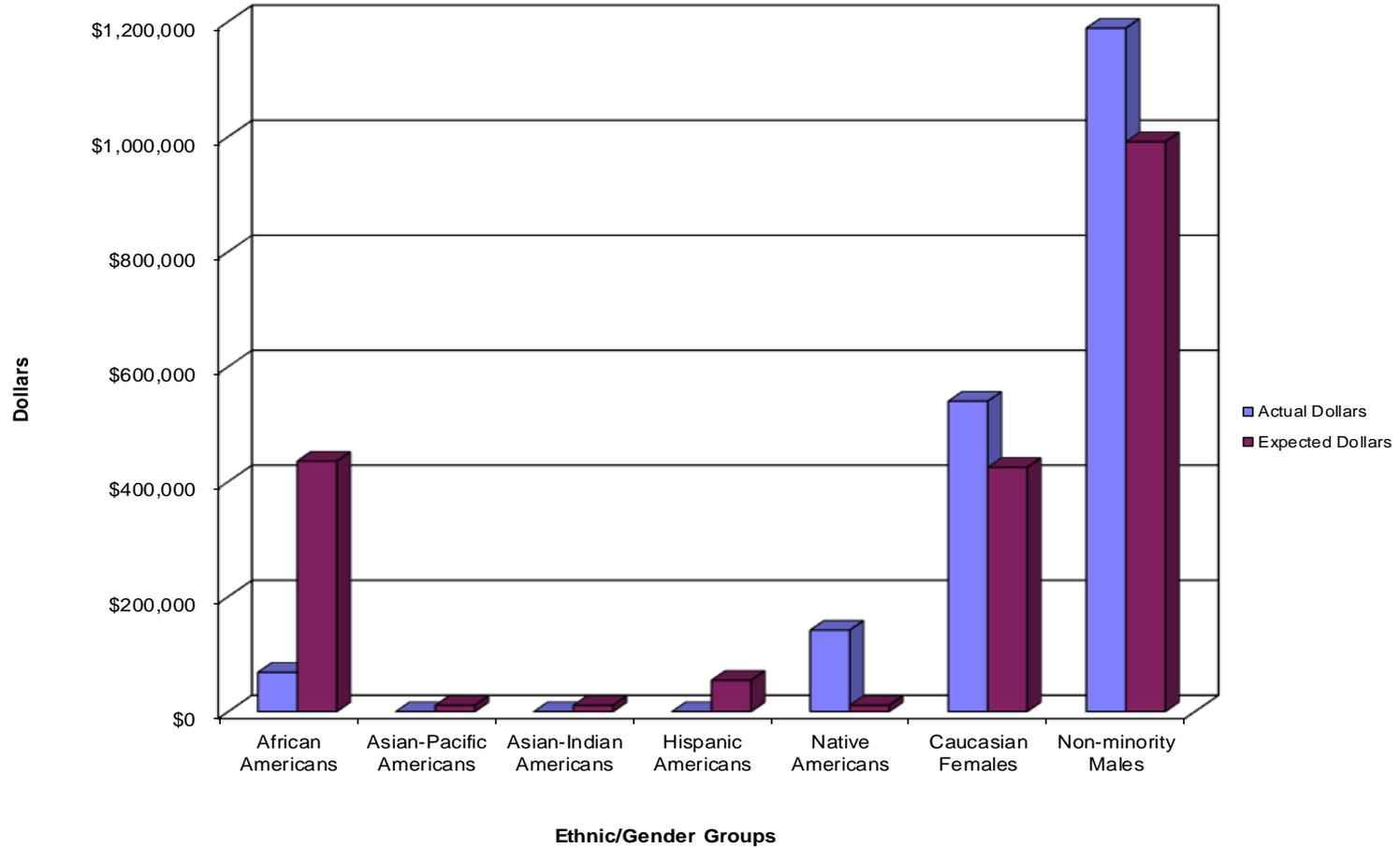
( † ) denotes a statistically significant overutilization.

( \*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.2: Disparity Analysis: Construction-related Services Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**



### 3. Engineering and Professional Services Prime Purchase Orders Valued \$10,001 to \$20,000

The disparity analysis of engineering and professional services prime purchase orders valued \$10,001 to \$20,000 is described below and depicted in Table 7.5 and Chart 7.3.

*African Americans* represent 13.33% of the available engineering and professional services businesses and received 1.61% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 1.33% of the available engineering and professional services businesses and received 0.58% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This underutilization is not statistically significant.

*Asian-Indian Americans* represent 3.11% of the available engineering and professional services businesses and received 2.91% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This underutilization is not statistically significant.

*Hispanic Americans* represent 4.44% of the available engineering and professional services businesses and received 3.66% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This underutilization is not statistically significant.

*Native Americans* represent 0.44% of the available engineering and professional services businesses and received 0.00% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Caucasian Females* represent 25.33% of the available engineering and professional services businesses and received 18.51% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Non-minority Males* represent 52.00% of the available engineering and professional services businesses and received 72.73% of the dollars on engineering and professional services purchase orders valued \$10,001 to \$20,000. This overutilization is statistically significant.



**Table 7.5: Disparity Analysis: Engineering and Professional Services Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$29,640	1.61%	13.33%	\$244,924	-\$215,284	0.12	< .05 *
Asian-Pacific Americans	\$10,720	0.58%	1.33%	\$24,492	-\$13,772	0.44	not significant
Asian-Indian Americans	\$53,418	2.91%	3.11%	\$57,149	-\$3,731	0.93	not significant
Hispanic Americans	\$67,160	3.66%	4.44%	\$81,641	-\$14,481	0.82	not significant
Native Americans	\$0	0.00%	0.44%	\$8,164	-\$8,164	0.00	----
Caucasian Females	\$339,976	18.51%	25.33%	\$465,355	-\$125,379	0.73	< .05 *
Non-minority Males	\$1,336,014	72.73%	52.00%	\$955,203	\$380,812	1.40	< .05 †
<b>TOTAL</b>	<b>\$1,836,928</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$1,836,928</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$0	0.00%	4.44%	\$81,641	-\$81,641	0.00	< .05 *
African American Males	\$29,640	1.61%	8.89%	\$163,282	-\$133,642	0.18	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Pacific American Males	\$10,720	0.58%	1.33%	\$24,492	-\$13,772	0.44	not significant
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$53,418	2.91%	3.11%	\$57,149	-\$3,731	0.93	not significant
Hispanic American Females	\$15,000	0.82%	0.89%	\$16,328	-\$1,328	0.92	----
Hispanic American Males	\$52,160	2.84%	3.56%	\$65,313	-\$13,153	0.80	not significant
Native American Females	\$0	0.00%	0.44%	\$8,164	-\$8,164	0.00	----
Native American Males	\$0	0.00%	0.00%	\$0	\$0	----	----
Caucasian Females	\$339,976	18.51%	25.33%	\$465,355	-\$125,379	0.73	< .05 *
Non-minority Males	\$1,336,014	72.73%	52.00%	\$955,203	\$380,812	1.40	< .05 †
<b>TOTAL</b>	<b>\$1,836,928</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$1,836,928</b>			

( \*) denotes a statistically significant underutilization.

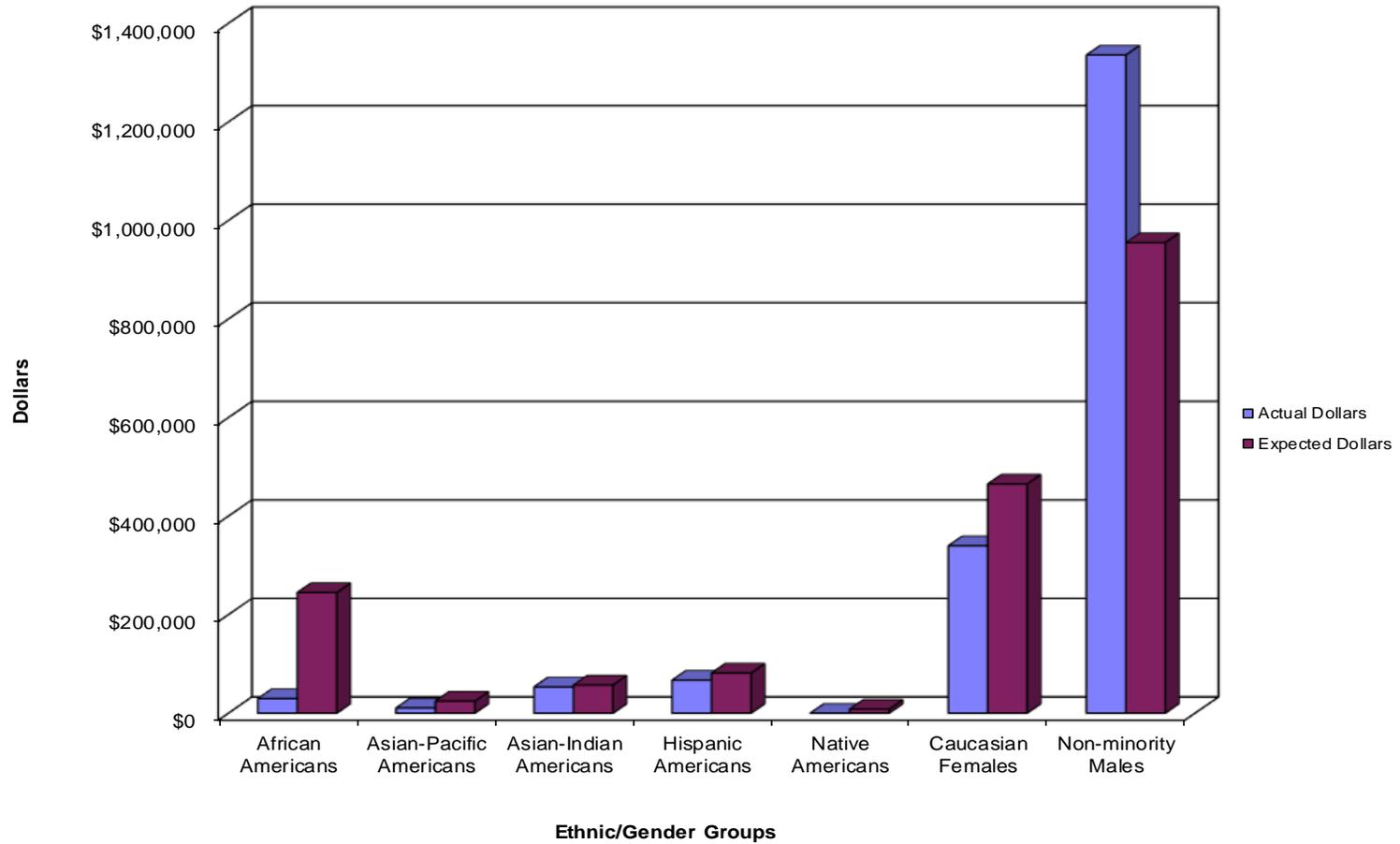
( † ) denotes a statistically significant overutilization.

( \*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.3: Disparity Analysis: Engineering and Professional Services Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**



#### **4. Materials, Commodities and Services Prime Purchase Orders Valued \$10,001 to \$20,000**

The disparity analysis of materials, commodities and services prime purchase orders valued \$10,001 to \$20,000 is described below and depicted in Table 7.6 and Chart 7.4.

*African Americans* represent 10.14% of the available materials, commodities and services businesses and received 1.54% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 1.09% of the available materials, commodities and services businesses and received 1.79% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Asian-Indian Americans* represent 0.36% of the available materials, commodities and services businesses and received 0.00% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Hispanic Americans* represent 1.09% of the available materials, commodities and services businesses and received 3.12% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. This study does not test statistically the overutilization of minority or gender groups.

*Native Americans* represent 0.36% of the available materials, commodities and services businesses and received 0.00% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Caucasian Females* represent 19.93% of the available materials, commodities and services businesses and received 2.85% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. This underutilization is statistically significant.

*Non-minority Males* represent 67.03% of the available materials, commodities and services businesses and received 90.69% of the dollars on materials, commodities and services purchase orders valued \$10,001 to \$20,000. This overutilization is statistically significant.



**Table 7.6: Disparity Analysis: Materials, Commodities and Services Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$79,461	1.54%	10.14%	\$522,588	-\$443,127	0.15	< .05 *
Asian-Pacific Americans	\$92,273	1.79%	1.09%	\$55,992	\$36,282	1.65	**
Asian-Indian Americans	\$0	0.00%	0.36%	\$18,664	-\$18,664	0.00	----
Hispanic Americans	\$160,960	3.12%	1.09%	\$55,992	\$104,968	2.87	**
Native Americans	\$0	0.00%	0.36%	\$18,664	-\$18,664	0.00	----
Caucasian Females	\$146,945	2.85%	19.93%	\$1,026,511	-\$879,567	0.14	< .05 *
Non-minority Males	\$4,671,582	90.69%	67.03%	\$3,452,811	\$1,218,771	1.35	< .05 †
<b>TOTAL</b>	<b>\$5,151,221</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$5,151,221</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$0	0.00%	2.54%	\$130,647	-\$130,647	0.00	< .05 *
African American Males	\$79,461	1.54%	7.61%	\$391,941	-\$312,480	0.20	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.72%	\$37,328	-\$37,328	0.00	----
Asian-Pacific American Males	\$92,273	1.79%	0.36%	\$18,664	\$73,610	4.94	**
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$0	0.00%	0.36%	\$18,664	-\$18,664	0.00	----
Hispanic American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Hispanic American Males	\$160,960	3.12%	1.09%	\$55,992	\$104,968	2.87	**
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$0	0.00%	0.36%	\$18,664	-\$18,664	0.00	----
Caucasian Females	\$146,945	2.85%	19.93%	\$1,026,511	-\$879,567	0.14	< .05 *
Non-minority Males	\$4,671,582	90.69%	67.03%	\$3,452,811	\$1,218,771	1.35	< .05 †
<b>TOTAL</b>	<b>\$5,151,221</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$5,151,221</b>			

( \* ) denotes a statistically significant underutilization.

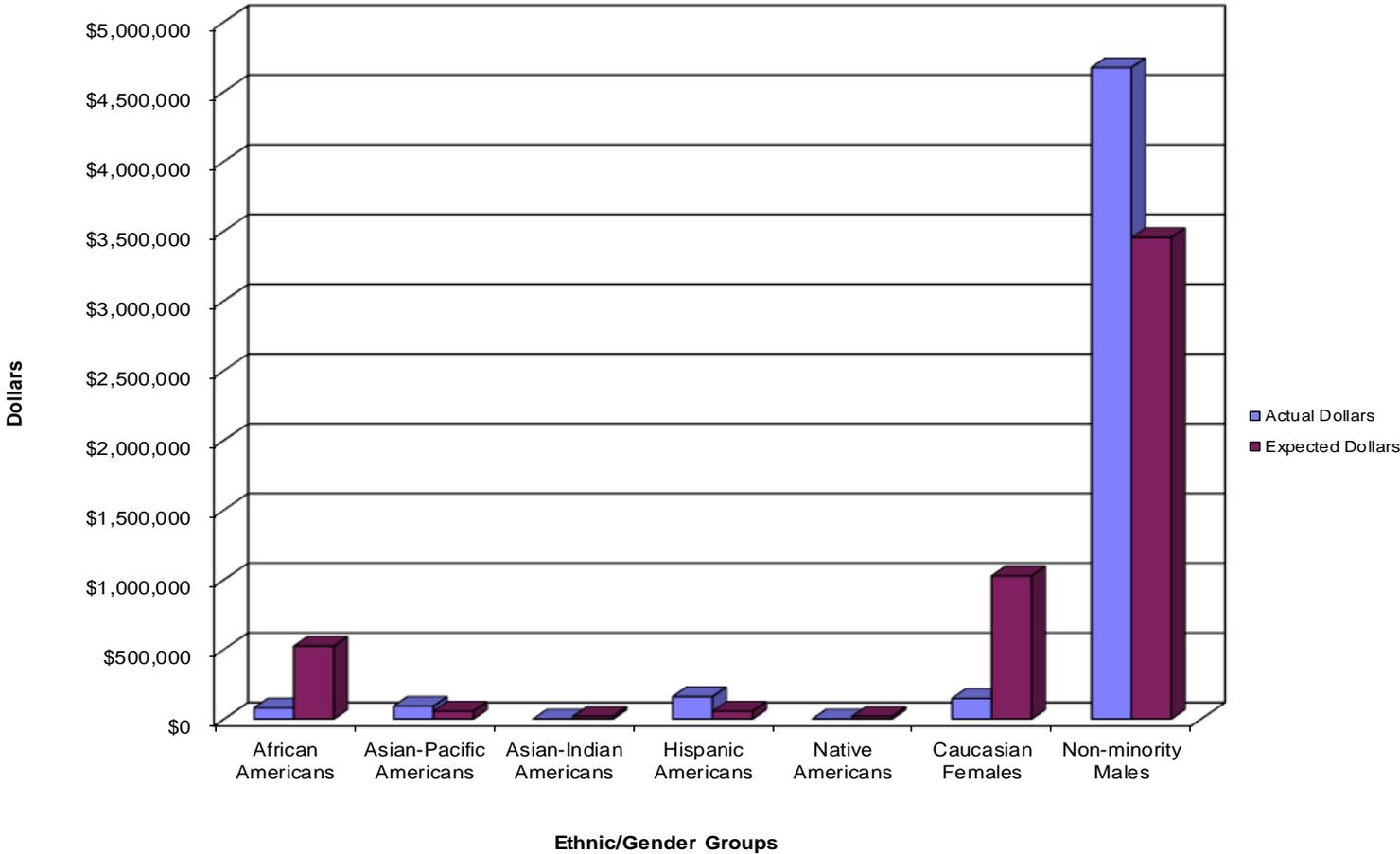
( † ) denotes a statistically significant overutilization.

( \*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.4: Disparity Analysis: Materials, Commodities and Services Prime Purchase Orders Valued \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**



**B. Disparity Analysis: Formal Prime Purchase Orders, by Industry**

**1. Construction Prime Purchase Orders Valued \$20,001 to \$1,710,000**

The disparity analysis of construction prime purchase orders valued \$20,001 to \$1,710,000 is described below and depicted in Table 7.7 and Chart 7.5.

*African Americans* represent 30.37% of the available construction businesses and received 3.59% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 2.62% of the available construction businesses and received 0.28% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is statistically significant.

*Asian-Indian Americans* represent 1.57% of the available construction businesses and received 0.00% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is statistically significant.

*Hispanic Americans* represent 3.66% of the available construction businesses and received 1.43% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is statistically significant.

*Native Americans* represent 1.05% of the available construction businesses and received 0.32% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is not statistically significant.

*Caucasian Females* represent 18.32% of the available construction businesses and received 14.53% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This underutilization is not statistically significant.

*Non-minority Males* represent 42.41% of the available construction businesses and received 79.86% of the dollars on construction purchase orders valued \$20,001 to \$1,710,000. This overutilization is statistically significant.



**Table 7.7: Disparity Analysis: Construction Prime Purchase Orders Valued \$20,001 to \$1,710,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$2,314,507	3.59%	30.37%	\$19,596,854	-\$17,282,347	0.12	< .05 *
Asian-Pacific Americans	\$180,914	0.28%	2.62%	\$1,689,384	-\$1,508,470	0.11	< .05 *
Asian-Indian Americans	\$0	0.00%	1.57%	\$1,013,630	-\$1,013,630	0.00	< .05 *
Hispanic Americans	\$920,933	1.43%	3.66%	\$2,365,138	-\$1,444,204	0.39	< .05 *
Native Americans	\$206,643	0.32%	1.05%	\$675,754	-\$469,111	0.31	not significant
Caucasian Females	\$9,374,313	14.53%	18.32%	\$11,825,688	-\$2,451,375	0.79	not significant
Non-minority Males	\$51,537,158	79.86%	42.41%	\$27,368,020	\$24,169,138	1.88	< .05 †
<b>TOTAL</b>	<b>\$64,534,468</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$64,534,468</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$40,170	0.06%	5.76%	\$3,716,645	-\$3,676,475	0.01	< .05 *
African American Males	\$2,274,337	3.52%	24.61%	\$15,880,209	-\$13,605,872	0.14	< .05 *
Asian-Pacific American Females	\$0	0.00%	1.05%	\$675,754	-\$675,754	0.00	< .05 *
Asian-Pacific American Males	\$180,914	0.28%	1.57%	\$1,013,630	-\$832,717	0.18	not significant
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$0	0.00%	1.57%	\$1,013,630	-\$1,013,630	0.00	< .05 *
Hispanic American Females	\$0	0.00%	0.52%	\$337,877	-\$337,877	0.00	----
Hispanic American Males	\$920,933	1.43%	3.14%	\$2,027,261	-\$1,106,328	0.45	< .05 *
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$206,643	0.32%	1.05%	\$675,754	-\$469,111	0.31	not significant
Caucasian Females	\$9,374,313	14.53%	18.32%	\$11,825,688	-\$2,451,375	0.79	not significant
Non-minority Males	\$51,537,158	79.86%	42.41%	\$27,368,020	\$24,169,138	1.88	< .05 †
<b>TOTAL</b>	<b>\$64,534,468</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$64,534,468</b>			

( \* ) denotes a statistically significant underutilization.

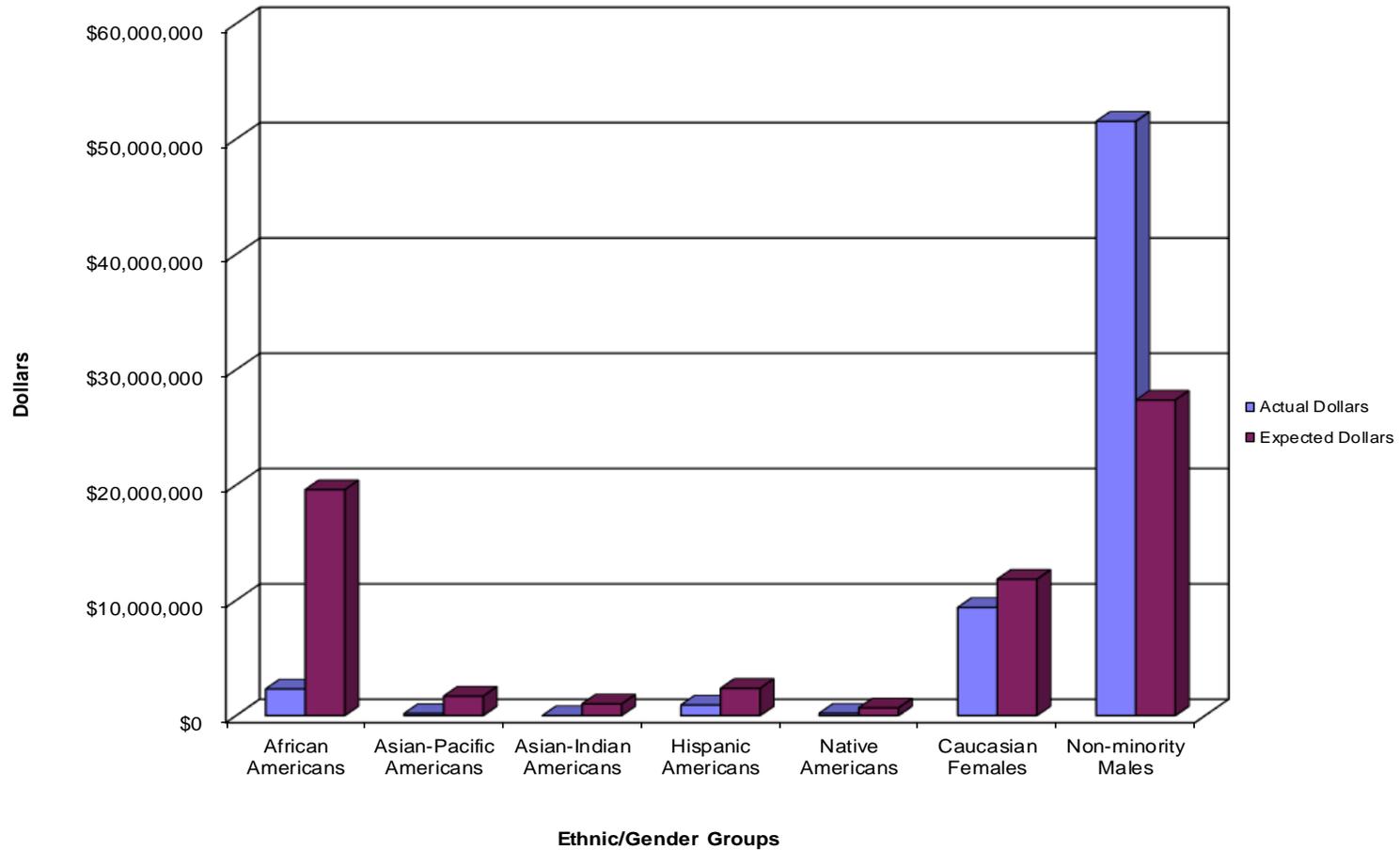
( † ) denotes a statistically significant overutilization.

( \*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.5: Disparity Analysis: Construction Prime Purchase Orders Valued \$20,001 to \$1,710,000,  
July 1, 2010, to June 30, 2015**



## 2. Construction-related Services Prime Purchase Orders Valued \$20,001 to \$500,000

The disparity analysis of construction-related services prime purchase orders valued \$20,001 to \$500,000 is described below and depicted in Table 7.8 and Chart 7.6.

*African Americans* represent 22.47% of the available construction-related services businesses and received 5.90% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 0.56% of the available construction-related services businesses and received 0.91% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This study does not test statistically the overutilization of minority or gender groups.

*Asian-Indian Americans* represent 0.56% of the available construction-related services businesses and received 2.69% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This study does not test statistically the overutilization of minority or gender groups.

*Hispanic Americans* represent 2.81% of the available construction-related services businesses and received 1.86% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This underutilization is not statistically significant.

*Native Americans* represent 0.56% of the available construction-related services businesses and received 4.50% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This study does not test statistically the overutilization of minority or gender groups.

*Caucasian Females* represent 21.91% of the available construction-related services businesses and received 6.68% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This underutilization is statistically significant.

*Non-minority Males* represent 51.12% of the available construction-related services businesses and received 77.46% of the dollars on construction-related services purchase orders valued \$20,001 to \$500,000. This overutilization is statistically significant.



**Table 7.8: Disparity Analysis: Construction-related Services Prime Purchase Orders Valued \$20,001 to \$500,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$1,831,794	5.90%	22.47%	\$6,977,994	-\$5,146,200	0.26	< .05 *
Asian-Pacific Americans	\$281,632	0.91%	0.56%	\$174,450	\$107,182	1.61	**
Asian-Indian Americans	\$834,875	2.69%	0.56%	\$174,450	\$660,425	4.79	**
Hispanic Americans	\$578,900	1.86%	2.81%	\$872,249	-\$293,349	0.66	not significant
Native Americans	\$1,397,468	4.50%	0.56%	\$174,450	\$1,223,018	8.01	**
Caucasian Females	\$2,074,111	6.68%	21.91%	\$6,803,545	-\$4,729,433	0.30	< .05 *
Non-minority Males	\$24,053,295	77.46%	51.12%	\$15,874,937	\$8,178,357	1.52	< .05 †
<b>TOTAL</b>	<b>\$31,052,075</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$31,052,075</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$1,626,497	5.24%	3.37%	\$1,046,699	\$579,798	1.55	**
African American Males	\$205,297	0.66%	19.10%	\$5,931,295	-\$5,725,998	0.03	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Pacific American Males	\$281,632	0.91%	0.56%	\$174,450	\$107,182	1.61	**
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$834,875	2.69%	0.56%	\$174,450	\$660,425	4.79	**
Hispanic American Females	\$180,000	0.58%	1.12%	\$348,900	-\$168,900	0.52	not significant
Hispanic American Males	\$398,900	1.28%	1.69%	\$523,350	-\$124,450	0.76	not significant
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$1,397,468	4.50%	0.56%	\$174,450	\$1,223,018	8.01	**
Caucasian Females	\$2,074,111	6.68%	21.91%	\$6,803,545	-\$4,729,433	0.30	< .05 *
Non-minority Males	\$24,053,295	77.46%	51.12%	\$15,874,937	\$8,178,357	1.52	< .05 †
<b>TOTAL</b>	<b>\$31,052,075</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$31,052,075</b>			

(\* ) denotes a statistically significant underutilization.

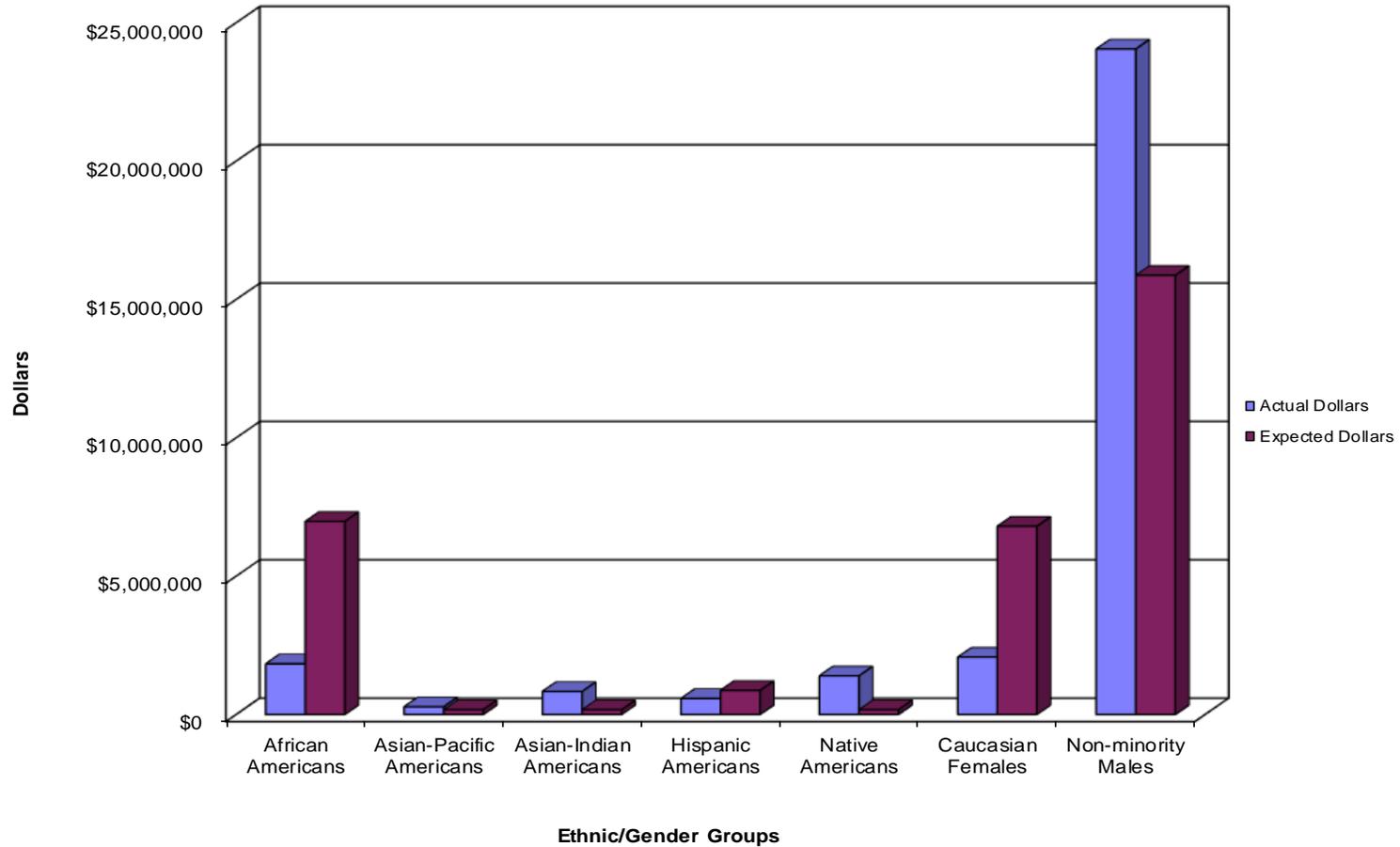
( † ) denotes a statistically significant overutilization.

(\*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.6: Disparity Analysis: Construction-related Services Prime Purchase Orders Valued \$20,001 to \$500,000, July 1, 2010, to June 30, 2015**



### 3. **Engineering and Professional Services Prime Purchase Orders Valued \$20,001 to \$460,000**

The disparity analysis of engineering and professional services prime purchase orders valued \$20,001 to \$460,000 is described below and depicted in Table 7.9 and Chart 7.7.

*African Americans* represent 13.33% of the available engineering and professional services businesses and received 2.97% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 1.33% of the available engineering and professional services businesses and received 0.05% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This underutilization is statistically significant.

*Asian-Indian Americans* represent 3.11% of the available engineering and professional services businesses and received 2.07% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This underutilization is not statistically significant.

*Hispanic Americans* represent 4.44% of the available engineering and professional services businesses and received 1.40% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This underutilization is statistically significant.

*Native Americans* represent 0.44% of the available engineering and professional services businesses and received 0.00% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Caucasian Females* represent 25.33% of the available engineering and professional services businesses and received 10.02% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This underutilization is statistically significant.

*Non-minority Males* represent 52.00% of the available engineering and professional services businesses and received 83.50% of the dollars on engineering and professional services purchase orders valued \$20,001 to \$460,000. This overutilization is statistically significant.



**Table 7.9: Disparity Analysis: Engineering and Professional Services Prime Purchase Orders Valued \$20,001 to \$460,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$1,537,411	2.97%	13.33%	\$6,913,272	-\$5,375,861	0.22	< .05 *
Asian-Pacific Americans	\$23,405	0.05%	1.33%	\$691,327	-\$667,922	0.03	< .05 *
Asian-Indian Americans	\$1,073,777	2.07%	3.11%	\$1,613,097	-\$539,320	0.67	not significant
Hispanic Americans	\$727,055	1.40%	4.44%	\$2,304,424	-\$1,577,369	0.32	< .05 *
Native Americans	\$0	0.00%	0.44%	\$230,442	-\$230,442	0.00	----
Caucasian Females	\$5,194,626	10.02%	25.33%	\$13,135,216	-\$7,940,590	0.40	< .05 *
Non-minority Males	\$43,293,266	83.50%	52.00%	\$26,961,760	\$16,331,505	1.61	< .05 †
<b>TOTAL</b>	<b>\$51,849,539</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$51,849,539</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$90,651	0.17%	4.44%	\$2,304,424	-\$2,213,773	0.04	< .05 *
African American Males	\$1,446,760	2.79%	8.89%	\$4,608,848	-\$3,162,088	0.31	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Pacific American Males	\$23,405	0.05%	1.33%	\$691,327	-\$667,922	0.03	< .05 *
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$1,073,777	2.07%	3.11%	\$1,613,097	-\$539,320	0.67	not significant
Hispanic American Females	\$77,000	0.15%	0.89%	\$460,885	-\$383,885	0.17	----
Hispanic American Males	\$650,055	1.25%	3.56%	\$1,843,539	-\$1,193,484	0.35	< .05 *
Native American Females	\$0	0.00%	0.44%	\$230,442	-\$230,442	0.00	----
Native American Males	\$0	0.00%	0.00%	\$0	\$0	----	----
Caucasian Females	\$5,194,626	10.02%	25.33%	\$13,135,216	-\$7,940,590	0.40	< .05 *
Non-minority Males	\$43,293,266	83.50%	52.00%	\$26,961,760	\$16,331,505	1.61	< .05 †
<b>TOTAL</b>	<b>\$51,849,539</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$51,849,539</b>			

( \*) denotes a statistically significant underutilization.

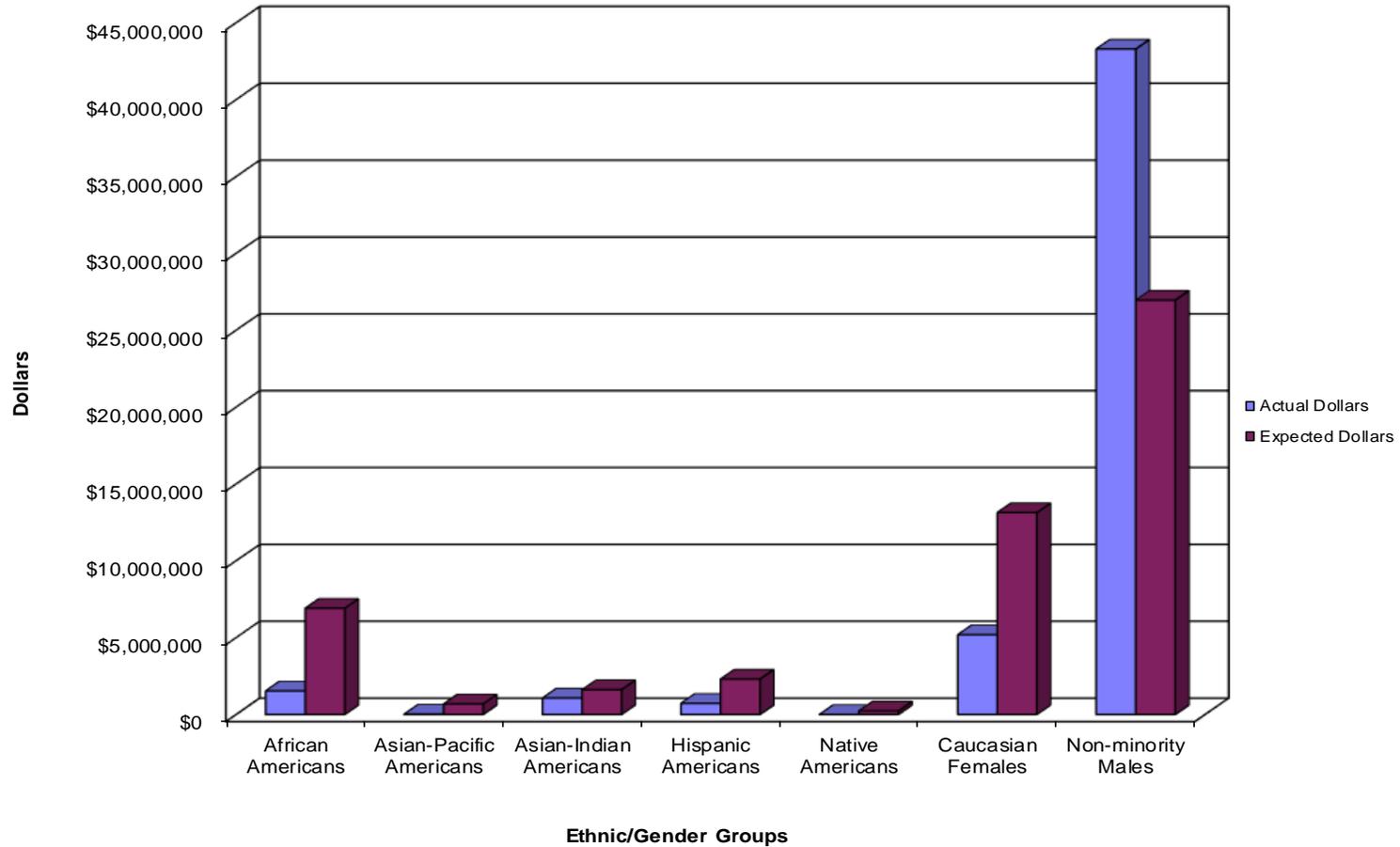
( † ) denotes a statistically significant overutilization.

( \*\* ) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.7: Disparity Analysis: Engineering and Professional Services Prime Purchase Orders Valued \$20,001 to \$460,000, July 1, 2010, to June 30, 2015**



#### **4. Materials, Commodities and Services Prime Purchase Orders Valued \$20,001 to \$350,000**

The disparity analysis of materials, commodities and services prime purchase orders valued \$20,001 to \$350,000 is described below and depicted in Table 7.10 and Chart 7.8.

*African Americans* represent 10.14% of the available materials, commodities and services businesses and received 0.51% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 1.09% of the available materials, commodities and services businesses and received 2.31% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This study does not test statistically the overutilization of minority or gender groups.

*Asian-Indian Americans* represent 0.36% of the available materials, commodities and services businesses and received 0.89% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This study does not test statistically the overutilization of minority or gender groups.

*Hispanic Americans* represent 1.09% of the available materials, commodities and services businesses and received 0.10% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This underutilization is not statistically significant.

*Native Americans* represent 0.36% of the available materials, commodities and services businesses and received 0.00% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. While this group was underutilized, there were too few available firms to determine statistical significance.

*Caucasian Females* represent 19.93% of the available materials, commodities and services businesses and received 1.07% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This underutilization is statistically significant.

*Non-minority Males* represent 67.03% of the available materials, commodities and services businesses and received 95.12% of the dollars on materials, commodities and services purchase orders valued \$20,001 to \$350,000. This overutilization is statistically significant.



**Table 7.10: Disparity Analysis: Materials, Commodities and Services Prime Purchase Orders Valued \$20,001 to \$350,000, July 1, 2010, to June 30, 2015**

<b>Ethnicity</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$126,209	0.51%	10.14%	\$2,512,710	-\$2,386,501	0.05	< .05 *
Asian-Pacific Americans	\$572,449	2.31%	1.09%	\$269,219	\$303,230	2.13	**
Asian-Indian Americans	\$220,781	0.89%	0.36%	\$89,740	\$131,041	2.46	**
Hispanic Americans	\$24,920	0.10%	1.09%	\$269,219	-\$244,299	0.09	not significant
Native Americans	\$0	0.00%	0.36%	\$89,740	-\$89,740	0.00	----
Caucasian Females	\$265,212	1.07%	19.93%	\$4,935,681	-\$4,670,470	0.05	< .05 *
Non-minority Males	\$23,558,574	95.12%	67.03%	\$16,601,837	\$6,956,738	1.42	< .05 †
<b>TOTAL</b>	<b>\$24,768,145</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$24,768,145</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$76,412	0.31%	2.54%	\$628,178	-\$551,765	0.12	< .05 *
African American Males	\$49,797	0.20%	7.61%	\$1,884,533	-\$1,834,736	0.03	< .05 *
Asian-Pacific American Females	\$0	0.00%	0.72%	\$179,479	-\$179,479	0.00	----
Asian-Pacific American Males	\$572,449	2.31%	0.36%	\$89,740	\$482,709	6.38	**
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$220,781	0.89%	0.36%	\$89,740	\$131,041	2.46	**
Hispanic American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Hispanic American Males	\$24,920	0.10%	1.09%	\$269,219	-\$244,299	0.09	not significant
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$0	0.00%	0.36%	\$89,740	-\$89,740	0.00	----
Caucasian Females	\$265,212	1.07%	19.93%	\$4,935,681	-\$4,670,470	0.05	< .05 *
Non-minority Males	\$23,558,574	95.12%	67.03%	\$16,601,837	\$6,956,738	1.42	< .05 †
<b>TOTAL</b>	<b>\$24,768,145</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$24,768,145</b>			

(\*) denotes a statistically significant underutilization.

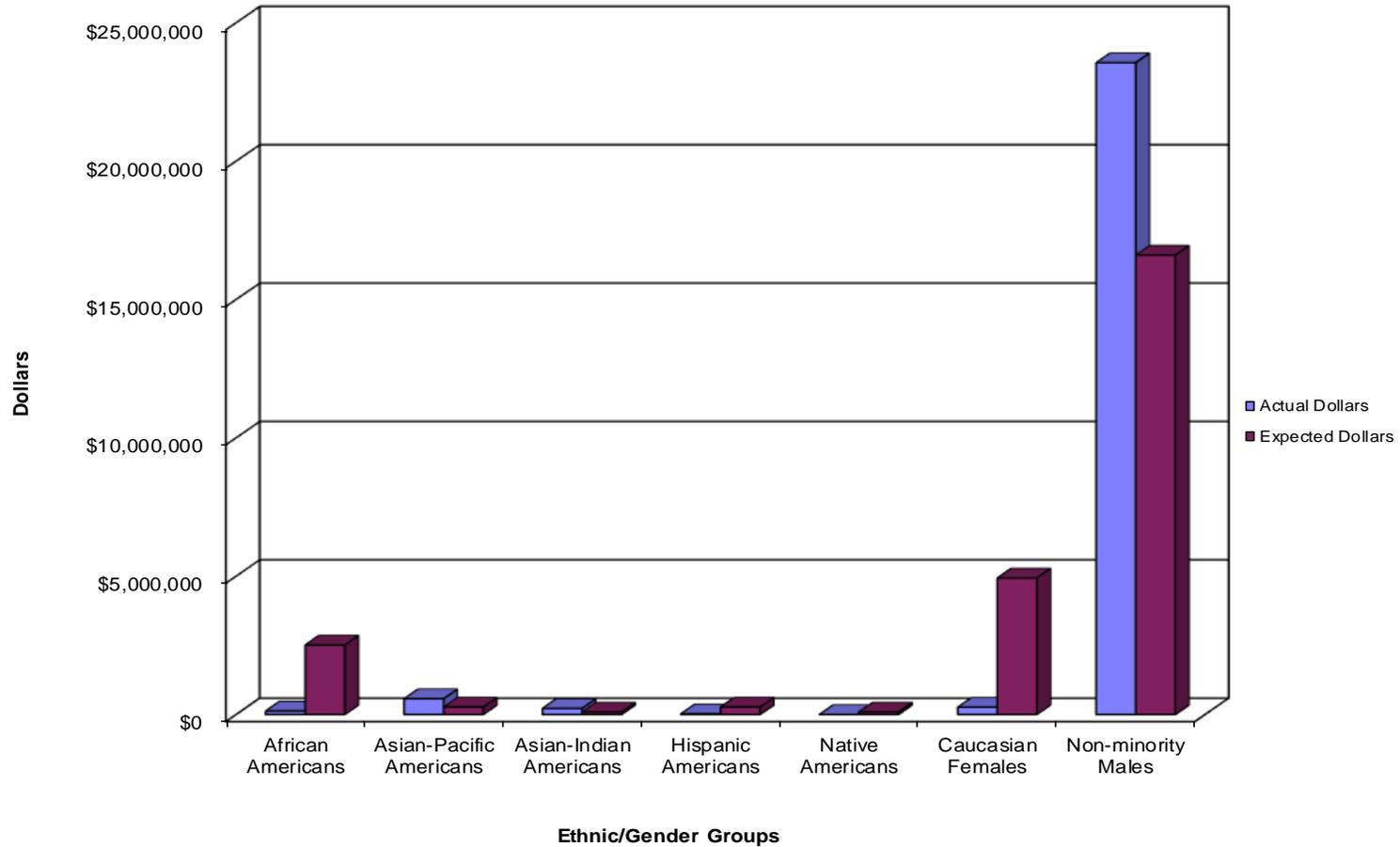
(†) denotes a statistically significant overutilization.

(\*\*) this Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.

(----) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 7.8: Disparity Analysis: Materials, Commodities and Services Prime Purchase Orders Valued \$20,001 to \$350,000, July 1, 2010, to June 30, 2015**



### **III. Disparity Analysis Summary**

#### **A. Construction Prime Purchase Orders**

As indicated in Table 7.11, disparity was found for African American, Hispanic American, and Caucasian female prime contractors on construction purchase orders valued \$10,001 to \$20,000. Disparity was also found for African American, Asian-Pacific American, Asian-Indian American, and Hispanic American prime contractors on construction purchase orders valued \$20,001 to \$1,710,000.

**Table 7.11: Disparity Summary: Construction Prime Purchase Order Dollars, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Construction	
	Purchase Orders Valued \$10,001 to \$20,000	Purchase Orders Valued \$20,001 to \$1,710,000
African Americans	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	<i>Disparity</i>
Asian-Indian Americans	No Disparity	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>	<i>Disparity</i>
Native Americans	No Disparity	No Disparity
Caucasian Females	<i>Disparity</i>	No Disparity



**B. Construction-related Services Prime Purchase Orders**

As indicated in Table 7.12, disparity was found for African American and Hispanic American prime contractors on construction-related services purchase orders valued \$10,001 to \$20,000. Disparity was also found for African American and Caucasian female prime contractors on construction-related services purchase orders valued \$20,001 to \$500,000.

**Table 7.12: Disparity Summary: Construction-related Services Prime Purchase Order Dollars, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Construction-related Services	
	Purchase Orders Valued \$10,001 to \$20,000	Purchase orders Valued \$20,001 to \$500,000
African Americans	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	No Disparity
Asian-Indian Americans	No Disparity	No Disparity
Hispanic Americans	<i>Disparity</i>	No Disparity
Native Americans	No Disparity	No Disparity
Caucasian Females	No Disparity	<i>Disparity</i>



**C. Engineering and Professional Services Prime Purchase Orders**

As indicated in Table 7.13, disparity was found for African American and Caucasian female prime contractors on engineering and professional services purchase orders valued \$10,001 to \$20,000. Disparity was also found for African American, Asian-Pacific American, Hispanic American, and Caucasian female prime contractors on engineering and professional services purchase orders valued \$20,001 to \$460,000.

**Table 7.13: Disparity Summary: Engineering and Professional Services Prime Purchase Order Dollars, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Engineering and Professional Services	
	Purchase Orders Valued \$10,001 to \$20,000	Purchase Orders Valued \$20,001 to \$460,000
African Americans	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	<i>Disparity</i>
Asian-Indian Americans	No Disparity	No Disparity
Hispanic Americans	No Disparity	<i>Disparity</i>
Native Americans	No Disparity	No Disparity
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>



**D. Materials, Commodities and Services Prime Purchase Orders**

As indicated in Table 7.14, disparity was found for African American and Caucasian female prime contractors on materials, commodities and services purchase orders valued \$10,001 to \$20,000. Disparity was also found for African American and Caucasian female prime contractors on materials, commodities and services purchase orders valued \$20,001 to \$350,000.

**Table 7.14: Disparity Summary: Materials, Commodities and Services Prime Purchase Order Dollars, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Materials, Commodities and Services	
	Purchase Orders Valued \$10,001 to \$20,000	Purchase Orders Valued \$20,001 to \$350,000
African Americans	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	No Disparity
Asian-Indian Americans	No Disparity	No Disparity
Hispanic Americans	No Disparity	No Disparity
Native Americans	No Disparity	No Disparity
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>



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# CHAPTER 8: Subcontract Disparity Analysis

## I. Introduction

Following the standards set by the United States Supreme Court in *Croson* and its progeny, a disparity study must document the local government’s utilization of available minority and woman-owned business enterprise (M/WBE) subcontractors on Louisville and Jefferson County Metropolitan Sewer District’s (MSD) purchase orders during the July 1, 2010, to June 30, 2015, study period. A detailed discussion of the statistical procedures for conducting a disparity analysis is set forth in *Chapter 7: Prime Contract Disparity Analysis*. The same statistical procedures are used to perform the subcontract disparity analysis.

Under a fair and equitable system of awarding subcontracts, the proportion of subcontracts and subcontract dollars awarded to M/WBE subcontractors should be relatively close to the proportion of available M/WBE subcontractors in MSD’s market area. Availability is defined as the number of willing and able businesses. The methodology for determining willing and able businesses is detailed in *Chapter 6: Prime Contractor and Subcontractor Availability Analysis*.

If the ratio of utilized M/WBE subcontractors to available M/WBE subcontractors is less than one, a statistical test is conducted to calculate the probability of observing the empirical disparity ratio or any event that is less probable.<sup>351</sup> *Croson* states that an inference of discrimination can be made *prima facie* if the observed disparity is statistically significant. Under the *Croson* model, non-minority male-owned businesses are not subjected to a statistical test.

## II. Disparity Analysis

As detailed in *Chapter 4: Subcontractor Utilization Analysis*, extensive efforts were undertaken to reconstruct the subcontractor records for MSD’s construction and engineering and professional services purchase orders. The disparity analysis was performed on construction subcontracts issued during the July 1, 2010, to June 30, 2015 study period because there were insufficient subcontract records to perform a disparity analysis for engineering and professional services subcontracts.

The subcontract disparity findings for construction are summarized below. The outcome of the statistical analysis is presented in the “P-Value” column of the table. A description of the statistical outcomes in the disparity table is presented in Table 8.1.



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<sup>351</sup> When conducting statistical tests, a confidence level must be established as a gauge for the level of certainty that an observed occurrence is not due to chance. It is important to note that a 100-percent confidence level or a level of absolute certainty can never be obtained in statistics. A 95-percent confidence level is considered by statistical standards to be an acceptable level in determining whether an inference of discrimination can be made. Thus, the data analysis here was done within the 95-percent confidence level.

**Table 8.1: Statistical Outcome Descriptions**

<b>P-Value Outcome</b>	<b>Definition of P-Value Outcome</b>
< .05 *	This underutilization is statistically significant.
not significant	<ul style="list-style-type: none"> <li>• M/WBEs: This underutilization is not statistically significant</li> <li>• Non-minority males: This overutilization is not statistically significant</li> </ul>
----	While this group was underutilized, there were too few available firms to determine statistical significance.
**	This Study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.
< .05 †	This overutilization is statistically significant.



### **III. Disparity Analysis: Construction**

The disparity analysis of construction subcontracts is described below and depicted in Table 8.2 and Chart 8.1.

*African Americans* represent 18.23% of the available construction businesses and received 7.67% of the construction subcontract dollars. This underutilization is statistically significant.

*Asian-Pacific Americans* represent 1.42% of the available construction businesses and received 2.92% of the construction subcontract dollars. This statistical test is not performed for the overutilization of M/WBEs.

*Asian-Indian Americans* represent 1.99% of the available construction businesses and received 0.09% of the construction subcontract dollars. This underutilization is statistically significant.

*Hispanic Americans* represent 1.99% of the available construction businesses and received 7.64% of the construction subcontract dollars. This study does not test statistically the overutilization of minority groups.

*Native Americans* represent 0.57% of the available construction businesses and received 0.80% of the construction subcontract dollars. This study does not test statistically the overutilization of minority groups.

*Caucasian Females* represent 14.81% of the available construction businesses and received 11.90% of the construction subcontract dollars. This underutilization is not statistically significant.

*Non-minority Males* represent 60.97% of the available construction businesses and received 68.97% of the construction subcontract dollars. This overutilization is not statistically significant.



**Table 8.2: Disparity Analysis: Construction Subcontracts,  
July 1, 2010, to June 30, 2015**

<b>Group</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African Americans	\$12,579,043	7.67%	18.23%	\$29,906,505	-\$17,327,461	0.42	< .05 *
Asian-Pacific Americans	\$4,795,532	2.92%	1.42%	\$2,336,446	\$2,459,086	2.05	**
Asian-Indian Americans	\$152,558	0.09%	1.99%	\$3,271,024	-\$3,118,466	0.05	< .05 *
Hispanic Americans	\$12,529,733	7.64%	1.99%	\$3,271,024	\$9,258,709	3.83	**
Native Americans	\$1,316,141	0.80%	0.57%	\$934,578	\$381,563	1.41	**
Caucasian Females	\$19,516,411	11.90%	14.81%	\$24,299,035	-\$4,782,624	0.80	not significant
Non minority Males	\$113,129,067	68.97%	60.97%	\$99,999,875	\$13,129,193	1.13	not significant
<b>TOTAL</b>	<b>\$164,018,486</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$164,018,486</b>			
<b>Ethnicity and Gender</b>	<b>Actual Dollars</b>	<b>Utilization</b>	<b>Availability</b>	<b>Expected Dollars</b>	<b>Dollars Lost</b>	<b>Disp. Ratio</b>	<b>P-Value</b>
African American Females	\$5,647,418	3.44%	3.99%	\$6,542,048	-\$894,630	0.86	not significant
African American Males	\$6,931,626	4.23%	14.25%	\$23,364,457	-\$16,432,831	0.30	< .05 *
Asian-Pacific American Females	\$25,163	0.02%	0.57%	\$934,578	-\$909,415	0.03	----
Asian-Pacific American Males	\$4,770,368	2.91%	0.85%	\$1,401,867	\$3,368,501	3.40	**
Asian-Indian American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Asian-Indian American Males	\$152,558	0.09%	1.99%	\$3,271,024	-\$3,118,466	0.05	< .05 *
Hispanic American Females	\$0	0.00%	0.28%	\$467,289	-\$467,289	0.00	----
Hispanic American Males	\$12,529,733	7.64%	1.71%	\$2,803,735	\$9,725,998	4.47	**
Native American Females	\$0	0.00%	0.00%	\$0	\$0	----	----
Native American Males	\$1,316,141	0.80%	0.57%	\$934,578	\$381,563	1.41	**
Caucasian Females	\$19,516,411	11.90%	14.81%	\$24,299,035	-\$4,782,624	0.80	not significant
Non minority Males	\$113,129,067	68.97%	60.97%	\$99,999,875	\$13,129,193	1.13	not significant
<b>TOTAL</b>	<b>\$164,018,486</b>	<b>100.00%</b>	<b>100.00%</b>	<b>\$164,018,486</b>			

( \*) denotes a statistically significant underutilization.

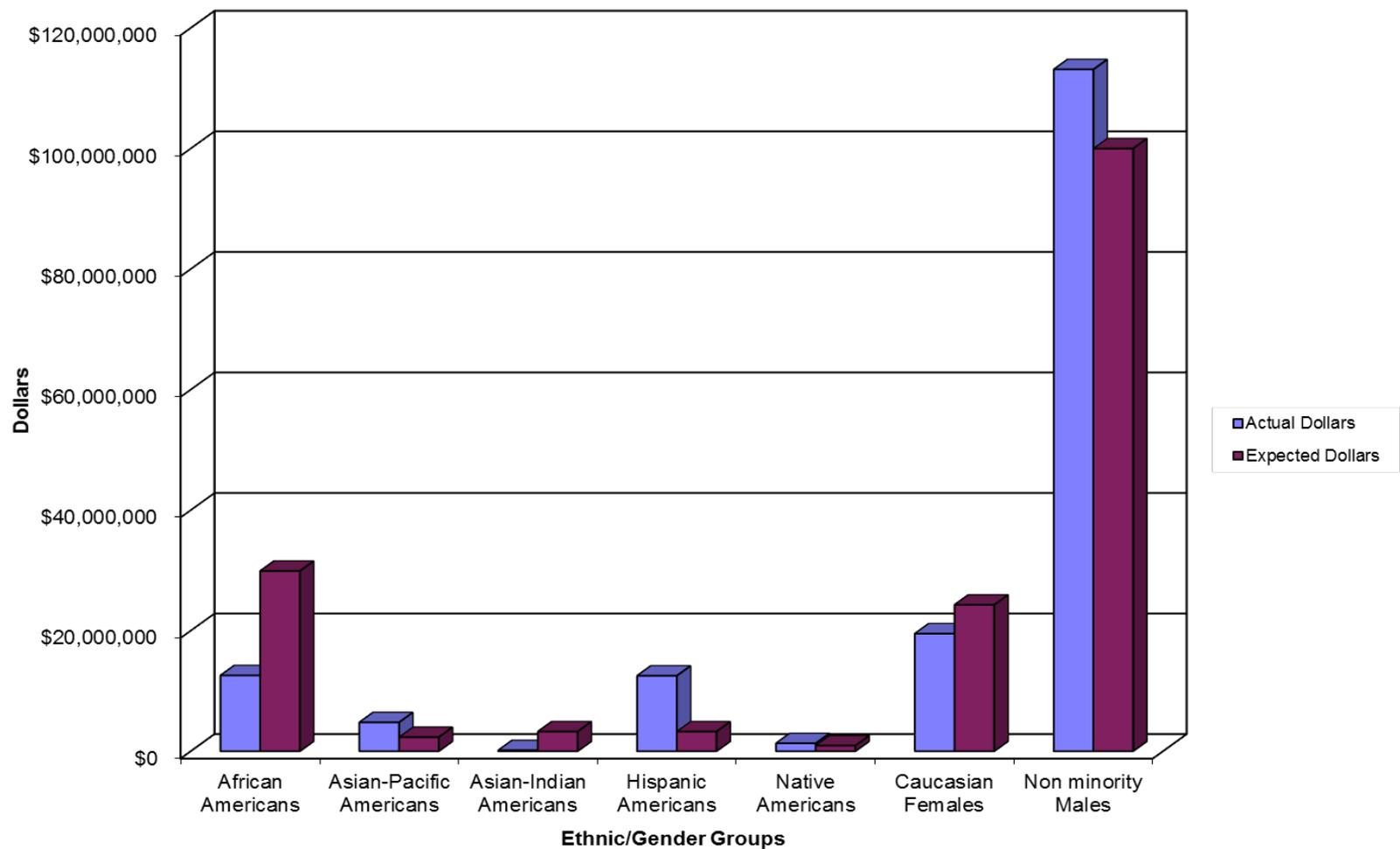
( † ) denotes a statistically significant overutilization.

( \*\* ) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

( ---- ) denotes an underutilized group with too few available firms to test statistical significance.



**Chart 8.1: Disparity Analysis: Construction Subcontracts,  
July 1, 2010, to June 30, 2015**



#### ***IV. Subcontract Disparity Summary***

As indicated in Table 8.3, disparity was found for African American and Asian-Indian American subcontractors on construction subcontracts.

**Table 8.3: Construction Subcontract Disparity Summary,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Asian-Pacific Americans</b>	<b>No Disparity</b>
<b>Asian-Indian Americans</b>	<b><i>Disparity</i></b>
<b>Hispanic Americans</b>	<b>No Disparity</b>
<b>Native Americans</b>	<b>No Disparity</b>
<b>Caucasian Females</b>	<b>Underutilized</b>



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# CHAPTER 9: Anecdotal Analysis

## I. Introduction

This chapter presents anecdotal testimony gathered through in-depth, one-on-one interviews and focus groups. The anecdotal testimony was analyzed to supplement the statistical findings of the Louisville and Jefferson County Metropolitan Sewer District (MSD) Disparity Study and to disclose any private sector or procurement practices that might affect the access of minority and woman-owned business enterprises (M/WBEs) to MSD's contracts.

The importance of anecdotal testimony in a disparity study was detailed in the landmark case, *City of Richmond v. J.A. Croson Co.*<sup>352</sup> (*Croson*). In its 1989 *Croson* decision, the United States Supreme Court specified the use of anecdotal testimony to determine whether remedial race-conscious relief may be justified in a market area. In *Croson*, the Court stated that "evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a [local entity's] determination that broader remedial relief [be] justified."<sup>353</sup>

Anecdotal testimony of individual discriminatory acts, when paired with statistical data, can document the routine practices affecting M/WBEs' access to contracting opportunities within an entity's market area. The statistical data can quantify the results of discriminatory practices, while anecdotal testimony provides the human context through which the numbers can be understood. Anecdotal testimony from business owners provides information on the types of barriers that are perceived to exist within the market area and affect the development of M/WBEs.

In addition, outreach was conducted to secure potential anecdotal interviewees. The strategies included soliciting the involvement of business owners in business community meetings and focus groups. Prime contractors, subcontractors, and suppliers who received an MSD contract were contacted to determine their willingness to participate in an interview.

### A. Anecdotal Evidence of Discrimination- Active and Passive Participation

*Croson* authorizes anecdotal inquiries along two lines. The first approach investigates active government discrimination as reflected in the award of prime contracts or acts of exclusion committed by representatives of a governmental entity. The purpose of this examination is to determine whether the government has committed acts that have prevented M/WBEs from obtaining contracts.

Anecdotal evidence of passive discrimination pertains to the activities of private-sector entities. Thus, the second line of inquiry examines the government's passive support of exclusionary



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<sup>352</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 509 (1989).

<sup>353</sup> *Id.*

practices that occur in the market area in which its funds are infused. Passive exclusion results from government officials knowingly using public funds to contract with companies that discriminate against M/WBEs, or failing to take positive steps to prevent discrimination by contractors who receive public contracts.<sup>354</sup>

The Court has cautioned that anecdotal evidence of discrimination is entitled to less evidentiary weight than statistical findings because the evidence concerns more private than government-sponsored activities.<sup>355</sup> Nonetheless, when paired with appropriate statistical data, anecdotal evidence of either active or passive forms of discrimination can support the imposition of a race or gender-conscious remedial program.<sup>356</sup>

As *Croson* points out, jurisdictions have at their disposal “a whole array of race-neutral devices to increase the accessibility of City contracting opportunities to small entrepreneurs of all races.”<sup>357</sup> Nevertheless, the Court found anecdotal evidence has value because it can paint a detailed portrait of the practices and procedures that generally govern the award of public contracts in the relevant market area. According to *Croson*, these narratives can identify specific generic practices that can be implemented, improved, or eliminated to increase contracting opportunities for businesses owned by all citizens. In this study, the utility of the anecdotal evidence is considered to the full extent of the law.

## **B. Anecdotal Methodology**

The methods used to elicit anecdotal information consisted of soliciting public comments during the business community meetings, one-on-one interviews, and focus groups. All the business owners interviewed were domiciled in Jefferson County, which was determined to be the market area, as described in *Chapter 5: Market Area Analysis*.

### **1. Business Community Meetings**

The first phase of the anecdotal process was to collect public comments at the business community meetings that were held in October 2016. Additionally, the meetings announced the study; informed the business community about the study’s legal framework, methodology, and timeline; and gave business owners the opportunity to speak with MSD representatives regarding contracting opportunities. The meetings also sought to solicit the business community’s support for the study and to identify business owners willing to participate in the anecdotal interviews.

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<sup>354</sup> *Croson*, 488 U.S. at 491-93, 509.

<sup>355</sup> *Concrete Works of Colorado v. City and County of Denver*, 36 F.3d at 1530 (10th Cir. 1994): “while a fact finder should accord less weight to personal accounts of discrimination that reflect isolated incidents, anecdotal evidence of a municipality’s institutional practices carry more weight due to the systemic impact that such institutional practices have on market conditions.”

<sup>356</sup> *Croson*, 488 U.S. at 509.

<sup>357</sup> *Id.*



The meetings were held at the following times and locations:

- Urban League, October 27, 2016, at 10:00 am
- Mellwood Art & Entertainment Center, October 27, 2016, at 4:00 pm

The outreach efforts to promote the business community meetings targeted firms in the construction, construction-related services, engineering and professional services, and material, commodities, and services industries. A total of 31 people attended the meeting at the Urban League, and 14 people attended the meeting at the Mellwood Art & Entertainment Center. MSD representatives were also in attendance. The meetings were recorded and transcribed. Testimony from these meetings has been incorporated in this chapter.

## **2. One-on-One Interviews**

The second phase of the anecdotal process included screening businesses for their interest in being interviewed. The screener collected basic demographic data and specific information to determine the relevant experiences of the business owners. The screener captured information regarding the interviewee's experiences with public contracting and willingness to recount experiences to a trained interviewer.

In the one-on-one interviews, anecdotal probes were used to solicit information from the interviewees. The questions sought to determine if the business owner encountered or had specific knowledge of instances in which formal or informal contracting practices had a positive or adverse impact on minority or woman-owned business enterprises during the July 1, 2010 to June 30, 2015 study period. A total of 40 interviews were conducted with African American, Asian-Pacific American, Asian-Indian American, Hispanic American, Native American, Caucasian female, and Caucasian male business owners that provide the types of goods and services procured by MSD.

## **3. Focus Groups**

The third phase of the anecdotal process was to facilitate two focus groups that were convened in January 2017. The focus groups were organized to accommodate the business owners who were reluctant to participate in either an anecdotal interview or provide public comment during the business community meetings.

The focus groups were held at the following times and location:

- St. Stephen's Family Life Center, January 27, 2016, 10:00 am
- St. Stephen's Family Life Center, January 27, 2016, 12:30 pm

A total of 13 business owners participated in the two focus groups. The focus group participants discussed concerns and questions regarding MSD's procurement practices. The focus group sessions were recorded and transcribed. Testimony from the focus groups has been incorporated in this chapter.



## **II. Anecdotal Findings**

### **A. Barriers Created by MSD Managers and Inspectors**

M/WBEs reported barriers that they encountered while interacting with MSD managers and inspectors.

A minority male owner of a construction company described an incident in which he believes an MSD manager did not adhere to the procurement policies:

---

*A few years back I was going to participate in a bid. At that time, you had to provide an affirmative action plan with your bid. I had an affirmative action plan, but I had a question, so I called MSD to ask a question to get clarification. The staff person said that she wouldn't answer it because it would be a conflict of interest. A few months down the road I was talking to another minority vendor. I asked, "Did you complete your affirmative action plan?" He said, "Oh yeah, you know [MSD staff name withheld] did our affirmative action plan for us." This is the same person that would not answer a simple question for me. But she helped him gain a competitive edge against us and others within the industry. I didn't tell anyone because I didn't want to rock the boat and threaten my relationship with them.*

---

This same business owner reported on an incident in which he believed an MSD inspector treated him unfairly:

---

*We do water restoration and mitigation services. For example, on water mitigation services we need to sanitize everything we touch according to industry standards. But MSD will not pay for sanitizing although we are required to do it. Often there is a room full of furniture that is affected by sewage. We must sanitize each piece, but we are not compensated for it. It could take eight to ten hours to sanitize and wipe off the sewage. So, we contacted [MSD staff name withheld] and was told that MSD will only approve to dump the waste. [MSD staff name withheld] met us at the site and threw us under the bus. I didn't speak up for myself because I was afraid of losing business. But I thought, she's got to be kidding me. She was the one that limited me to only dumping the sewage. Then she called this other company to "finish" the work. Now, we did all this work. We worked for four to five days on that job. We did all this work and then she calls the other company to satisfy the homeowner. I don't know what she had them do because we had done everything. I've had bad experiences with this same manager abusing her authority and her power. If she calls me, I try not to get into a confrontation with her. She is very confrontational. When she calls you, she doesn't talk to you, she talks at you. She talks down to us and treats us like a child.*

---



A minority male owner of an engineering and professional services company reported that he had trouble receiving credible feedback on his work from MSD inspectors:

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*There was an incident on two projects where we received bad vibes from one person who works for MSD. When he checked our drawings, he gave us one-word comments which is tough to follow and understand what's required. That presented quite a challenge for us to comply or reply to the comments.*

---

A minority male owner of an engineering and professional services company believes that politics can be a hindrance for businesses attempting to do business with MSD:

---

*MSD is very political. We don't deal well with politics, and politics run through MSD from the top to the bottom. It's just very political. Although we are a highly regarded consulting company, regardless of our MBE status.*

---

A minority male owner of an engineering and professional services company reported that certain companies are awarded contracts without meeting the solicitation specifications:

---

*MSD had specifications that required active, off-duty police officers for security services. In the past, they used correction officers or retired officers. Other companies were underbidding me because they could use non-active sworn police officers, which were completely outside of the specifications. I was the only one following the specifications, and with that of course, my costs were significantly higher because my guys are active police officers. This is something that I still struggle with on MSD jobs. They continue to award contracts contrary to their specifications.*

---

A minority female owner of a professional services company believes that some bid specifications are designed to benefit the incumbent contractor:

---

*There was no transparency when I submitted my bid. There were so many holes and questions that I had when I submitted my bid that it almost made me feel uncomfortable submitting it. It just seemed like we were going through the motions and that they had wasted our time because they already knew who they were going to choose. It was almost like a setup for failure. I could have guessed that after I submitted my bid, no one else was going to win including my company or any of my competitors except for the company that already had the contract.*

---



A minority male owner of an engineering and professional services company believes that minority consultants are treated differently by MSD managers when their company begins to grow and become successful:

---

*As a minority consultant at MSD, if you grow, you are considered too big for your britches. You need to be obedient and take whatever they dish out.*

---

## **B. Bid Shopping**

Subcontractors reported experiences with prime contractors shopping their subcontract bid. The practice as reported occurs both prior to the prime contractor submitting its bid to MSD and after the prime contractor is awarded a contract.

A minority male owner of a construction company reported an instance when a prime contractor removed him from the prime contract when he refused to lower his bid.

---

*I put a bid together and submitted it to a general contractor. I was low, and the general contractor used me. After he won the contract he asked me to cut my price, and I told him, "No." He didn't use me.*

---

A minority female owner of an engineering and professional services company reported that some prime contractors purposefully seek quotes for services to document that a good faith effort was made when there is no genuine intent to subcontract with the M/WBE:

---

*I have found that a lot of engineering firms shop bids around. They want to pay the least amount regardless of the scope of work. I receive daily inquiries for quotes to lay brick or put concrete down from architecture firms. We do design services but not that work. It seems like they are doing this on purpose, so they can say we contacted three M/WBE professional services firms and they all said no. And they are not asking for services that we do. We don't lay concrete. I think that there is a serious loophole in the procedures that allows this to happen.*

---

A Caucasian female owner of a construction company believes that the practice of bid shopping would be reduced if prime contractors were required to include their list of subcontractors with the bid at the time of the bid opening:

---

*If prime contractors don't list their subcontractors at the time of the bid, they then could shop prices or make changes as to who gets the job. I don't think that is fair. So, I think the list needs to be submitted with their bid.*

---



A minority male owner of a materials and commodities company believes there would be transparency in the bid process if prime contractors were required to list their subcontractors at the time of the bid opening:

---

*I have the ability to compete fairly with my competitors. I'm the second largest [withheld services provided] contractor in Louisville. So, I don't have a problem competing. But what is needed is more transparency so that everybody is bidding apples to apples. MSD needs to figure out a way to keep general contractors from fudging prices and claim that a certain subcontractor was higher or lower than another subcontractor. If a general contractor has a relationship with a subcontractor, they will tell that contractor the quote of the other competitor, so they can come in lower.*

---

A minority male owner of a construction company believes bid shopping would be reduced if prime contractors were required to list their subcontractors in their bid:

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*When prime contractors are required to provide their subcontractors with their bid, it keeps the prime contractor from shopping prices to get a better price. If you make them do it right away, it keeps everybody honest.*

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A minority male owner of a construction company explained why he believes M/WBEs are negatively impacted when prime contractors are not required to list their subcontractors when they submit their bids:

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*If they don't list the subcontractors, they go back and try to negotiate for a lower price or don't use the quote at all. They will let somebody that they know do the work cheaper, and the minority or the woman-owned business never hears back from them. So absolutely, they should list their subcontractors with their bid.*

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A minority female owner of an engineering and professional services company explained why she believes prime contractors should be required to present their subcontractors at the time of the bid opening:

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*I think everything should be conducted above board to create an even playing field. I have obtained my M/WBE certification, and some prime contractors wait to see if they win the bid and then go out and hunt for an M/WBE. It really should happen the other way around. They will ask you to be their designated minority-owned firm, but you don't do any work. We are just allowing them to put a checkmark by minority participation. This happens a lot.*

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A Caucasian female owner of a construction company reported that oftentimes her bid is used to win the prime contract, but her services are not used:

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*The prime contractors will take our bid and do the work in-house and use us on other work that is less costly. Or others will take my bid, win the prime contract, and never use us. [Company name withheld] is one of those construction firms.*

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A minority female owner of a construction firm reported that she no longer submits quotes to prime contractors who refuse to use her services after the contract is awarded:

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*There are some contractors we don't do work with because they chop our price after they are awarded the prime contract. They went in with our bid then they don't use us.*

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### **C. “Good Old Boy Network”**

Many instances were reported in which interviewees believed that the “good old boy” network operates as a barrier to their participation on MSD’s contracts.

A minority male owner of an architecture and engineering firm believes MSD’s proposal evaluation process supports the “good old boy” network:

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*The “good old boy” network is absolutely present in the architecture industry. What tends to happen is the same firms get the work repeatedly. Since they work together, they tend to continue to win the same work. And the evaluation rating sheets are scored to encourage repeat contract awards. It creates an environment where awards are consistently given to the same people or teams repeatedly.*

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This same business owner reported that a few design consultants receive most of MSD’s engineering contracts:

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*MSD’s construction department has preferred consultants. The engineering design services are given to pretty much the same firms. The same firms tend to win the projects over and over again. There is no variation in the department’s pool of successful bidders.*

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A Caucasian female owner of an engineering and professional services company believes that her industry is controlled by the “good old boy” network:

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*Traditionally, architecture and engineering is a white, male-dominated industry. A lot of the engineers in decision-making positions are white men, and they generally award contracts to other white male engineers.*

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A minority male owner of an engineering and professional services company believes that the same contractors receive the majority of the contract awards:

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*If you look at the companies that are getting the work, it is a good indicator that the “good old boy” network still exists.*

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A minority female owner of an engineering and professional services firm believes that her main competitors are the consultants in the “good old boy” network:

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*Being a minority woman competing against all these Caucasian males is very difficult. So, I say absolutely there is a “good old boy” network.*

---

A minority male owner of an engineering and professional services company believes that the “good old boy” network is very influential in the industry:

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*The “good old boy” network does influence contracting decisions in my industry. Unfortunately, in my industry the “good old boy” network is a deterrent to receiving work. Traditionally, the managers that perpetuate the good old boy network are not advocates for diversity and inclusion.*

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A minority male owner of a construction company believes that exclusionary networks are prevalent in his industry:

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*The “good old boy” exists because getting work is strictly about who you know and those that are in that circle get all the work. If you’re not within that circle, you basically get left out. And if you notice who gets the work at MSD, it’s usually those within that circle.*

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A minority male owner of a materials and commodities services company explained why he believes the “good old boy” network continues to dictate the contract award decisions in his industry:

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*The “good old boy” network works with people that they know and can relate to. It’s part of the old racial divide. The “good old boy” network is alive and well.*

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A minority male owner of a construction company believes that the trucking industry is controlled by the “good old boy” network:

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*The trucking industry has always been dominated by the “good old boy” network, and it probably will continue. It’s just how it is. So, hopefully the Supplier Diversity Program will never go away. Well, I pray that it doesn’t go away.*

---

A minority male owner of a construction company believes that the “good old boy” network permeates the construction industry beyond MSD’s market area:

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*The “good old boy” network is present in the construction industry. It is present locally and nationally, too. I have tried to break into the market, and it just didn’t happen for that reason.*

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A minority male owner of an engineering and professional services company described how the “good old boy” network operates:

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*The “good old boy” network usually receives information regarding contracting opportunities a long time before they are published. Even though you may have one month to put the proposal together, most of the time they have already handpicked someone. They may say this project is coming up, so you better get ready for it. But they already have someone lined up. Getting bid information and learning about the selection process is an area that really affects minority businesses. As minorities, we don’t belong to the network, and so consequently we don’t get the information.*

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A minority male owner of a construction company explained why minority contractors are often excluded from the “good old boy” network:

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*The “good old boy” network is primarily White prime contractors that support one another. They help and support one another in getting work even though they are competitors. They pass work on to one another.*

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A minority male owner of a construction company believes that certain woman-owned businesses are a part of the “good old boy” network:

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*The “good old boy” network is the reason that so many minorities, especially African American businesses are discouraged from seeking work with MSD. Woman-owned businesses are sisters, daughters of established white prime contractors.*

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This same business owner does not believe that the construction contractors on MSD projects are representative of the local population:

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*More than half of the city is populated by African Americans. African Americans represent at least 70 percent of the population. Yet, in the construction industry we barely exist. It’s sad. It’s because the opportunities are not there. I’ve dealt with this mess for 30 years, and it hasn’t gotten any better. I’m so glad that MSD is doing this study. It’s better than nothing, but they need to do more especially for start-ups and business owners who are trying to learn the process and figure things out.*

---

A Caucasian female owner of an engineering and professional services company believes that the same few consultants are awarded the large professional services contracts:

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*When it comes to MSD’s professional services contracts, a lot of them are going to the same prime consultants. Historically, the large professional contracts are typically awarded to the five top major players.*

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A Caucasian female owner of a construction company reported that an MSD manager informed her that he awarded a contract to a contractor because he was a friend:

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*MSD’s managers can hand out work up to \$20,000 without going through a competitive bid process. One manager told me that he gave the work to his buddy because he knew that he needed work.*

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A minority male owner of a materials and commodities services company explained why it is hard for him to be competitive with the “good old boy” network:

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*If you're a small company like me and my dad, it's really hard to compete with the “good old boys” because they have so many trucks. They have 20 or 30 trucks and we have three. They are going to call the guy that has more trucks. And they have more trucks because they have been in the system with the good old boy network for a long time. So, they don't have to worry about getting the work, they just keep buying trucks. And that's how that works.*

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A minority male owner of a construction company reported that the most recent economic downturn severely impacted M/WBEs because of the “good old boy” network:

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*MSD is a good old boy system, and that system hasn't changed in 100 years. So, the same large companies get all the contracts. The recession just about wiped me out. And many minority businesses went out of business because of that recession because the work went to the “good old boys.”*

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A Caucasian female owner of an engineering and professional services company believes that the “good old boy” network is prevalent in MSD’s engineering department:

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*The “good old boy” network is present at MSD. MSD's white male engineers like to give business to other white male engineers.*

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#### **D. Difficulty Meeting Bonding and Insurance Requirements**

Access to bonding and adequate financing is vital to business survival and especially to the solvency of small, minority, and new businesses. A Caucasian female owner of a construction company reported that she must bid as a subcontractor because MSD’s bonding requirements are too restrictive:

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*When MSD requires a bid bond or a performance bond, we are unable to bid as a prime contractor. Even if it is for a small project, we are not able to bond it. In fact, we must bid as a subcontractor because we cannot meet the bonding requirements. In the construction industry, it's difficult to obtain a bond. The cost is ridiculous which has made it very difficult.*

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A minority male owner of a construction company reported that he is forced to work as a subcontractor because he cannot meet the bonding requirements. As a subcontractor, he is at the mercy of the prime contractor:

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*The bonding requirements limits us to what we can do as a prime contractor. If you can't get bonding, you can't bid. And at that point we are limited to being a subcontractor. Then, we are at the mercy of the prime contractor. So, not being able to get bonding limits us to what we can do.*

---

A minority male owner of a construction company reported that, although he is qualified to perform as a prime contractor, he must work as a subcontractor because of MSD's bonding requirements:

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*There are jobs that we are qualified to do the work, but we can't meet the bond, so we must walk away.*

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A Caucasian female owner of an engineering and professional services company explained why bid bonds create barriers for M/WBEs:

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*They should change the bid and performance bond requirements. It is difficult for a minority or woman-owned business to reach the prime contractor level when you can't meet the bid bond requirements because it's too costly. A bid bond could cost \$80,000. Who has \$80,000 laying around if you're a small business to pay the insurance company for the bond? And then you must wait a year to get the money back from MSD. M/WBEs are prevented from being a prime contractor because of the mere fact that they can't afford the bid or the performance bonds. Also, a lot of prime contractors ask M/WBEs to get their own bid bonds to subcontract on the projects. I understand completely why performance or bid bonds are important for protection on the project. But there should be an option where the project is still protected yet it's not costing an arm and a leg for M/WBEs to do business.*

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A minority male owner of a construction company explained why start-up firms pay more for bonds than established companies:

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*As a startup, trying to meet the bonding requirements is a challenge. The bonding companies require a certain payment history as a business owner. If not, then you pay a premium for a bond as compared to an established firm. This just isn't fair. I have to pay more for my bond than my competitors.*

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A minority male owner of a construction company reported that the cost of insurance can also be higher for small firms:

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*Insurance is too expensive, of course. We pay more for our insurance than other firms. Larger firms pay fewer dollars per contract opportunity than we pay. We pay more per contract because we don't have as much experience as they do.*

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### **E. Difficulty Obtaining Financing**

Interviewees reported on the obstacles they encountered while attempting to secure financing for their small businesses. A minority male owner of a construction company believes that racism prevents minority businesses from obtaining financing:

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*Difficulties obtaining financing as a construction contractor is due to racism. Our industry has significant issues with preference or preferred contractors. There are negative connotations around how minority businesses perform, especially in the construction industry. A lot of education is not required to work in our industry. And because of that, I believe that lenders perceive us in a negative light.*

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A Caucasian female owner of an engineering and professional services company explained how the lack of financing continues to impact her small business:

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*The inability to get financing has greatly impacted my firm, especially when the cash flow is not flowing, and we can't get our invoices paid. We have no back-up financially. So, we're basically running on cash. It's very important that we get financing, but the fact is we don't have any of that.*

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A minority male owner of an engineering and professional services company reported that his firm was unfairly evaluated for a loan:

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*I tried to buy out our senior partner, and I approached many banks to get a loan. We had good financials, and everything seemed fine. Then there was this mysterious time lapse. After I told them that we were a minority-owned professional engineering business, I received a wall of requirements shoved back at me. But up until that point it had not been an issue. Fortunately, I got a loan from SBA through the federal government.*

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A minority male owner of a construction company believes that minorities encounter difficulties with financial institutions when trying to obtain loans:

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*It is difficult for minorities to get financing or credit. The excuse they give is that minorities don't have the wherewithal to be able to pay back their loans. So, they won't give us credit.*

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A minority male owner of a construction company reported that, although he secured a line of credit, the loan amount was so much less than the request that it was tantamount to a loan denial:

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*Without a certain amount of operating capital, the banks will flat out not give us a loan. I was approved for a line of credit, but it was so small that it didn't begin to help with my needs. So, you might as well say I got declined. Since they gave me such a small fraction of what I asked for, it wasn't a whole lot of help.*

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A minority male owner of a construction company experienced difficulties trying to secure financing for his business despite his long history as a business owner:

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*Financing has been an issue, we encounter one hurdle after another hurdle. I have been in business for several decades. But when it comes to getting operating capital, it's like I'm a start-up business again. This is a huge hurdle. We want to win the contract, but we can't get the contract unless we have the equipment to do the work. I'm not going to quit because I believe something is going to change, sooner or later.*

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A minority male owner of a construction company reported that his inability to obtain financing for his company impacts the solvency of his business:

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*It's hard when we need capital and a crisis hits and no one wants to lend us money unless we have money, which is ridiculous. Lack of financing is a hindrance because it is difficult to manage our cash flow especially when we must wait five months to get paid. It's tough.*

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## **F. Late Payments**

The negative impact of late payments on a business was reported by many interviewees. Late payments by both MSD and prime contractors were identified as occurring on a regular basis.

A minority male owner of a construction company reported that he is paid late as a subcontractor on MSD projects because MSD pays its prime contractors late:

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*Our contract with the prime contractor requires that we receive payment within 30 days, but we get paid in 60 days. The prime contractor doesn't make any commitments regarding payment because MSD pays late. So, we have to spend a lot of resources to track down when the prime contractor is paid by MSD. Even with all of this effort, the prime contractor still doesn't bill timely. We really don't have a due date as far as prime contractors are concerned. We get paid when they get paid.*

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A minority male owner of an engineering and professional services company reported that he has waited six months to receive payment from MSD:

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*It would be great if MSD would turn around our invoices a little sooner. We have waited as much as six months for MSD to process our invoice.*

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A minority male owner of a construction company reported that late payments can have a devastating impact on small minority businesses:

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*Some prime contractors will drag out paying us for 90 days. Even though we have a 30-day turnaround in our contract. But MSD is really slow about paying too. Our payment from MSD on our prime contracts are late 40 percent of the time. I know of a minority-owned company that went out of business because MSD was always late.*

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A Caucasian female owner of a construction company reported that MSD oftentimes pays late:

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*We did [work] and MSD was really bad about paying consultants. They are terrible paying consultants in my experience. I think they don't have the time to effectively process invoices. And it also depends on who is the project manager at MSD. That affects how long it will take. This was very frustrating because we had to borrow money to pay our employees and vendors. We also had to pay interest on the borrowed money.*

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A Caucasian female owner of an engineering and professional services company reported that she is paid late as both a prime contractor and a subcontractor on MSD projects.

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*It is very exhausting trying to get paid from MSD. I've had invoices that have been outstanding for months. Other clients pay us timely. When I work as a subcontractor on an MSD project, there is a lot of finger pointing when we try to get paid. The prime contractor will say it's MSD's fault because they are not paying them promptly. But if a prime contractor owes me \$5,000 on a half a million-dollar contract, it irritates me that they hold money from me for a long period of time. I'm pretty lenient because I will let it go for 90 days. But, I have waited much longer than that. This has happened at least six times. I'm still waiting on payment from a prime contractor, and it's been nine months. They said MSD has not paid them.*

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A minority male owner of an engineering and professional services company explained why it took almost one year to receive payment from MSD:

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*We did a large project for MSD, and at one point we waited 11 months for payment. It was the upper management of MSD that encouraged us to start work without a contract. They were very apologetic because they could not pay us since they skipped certain procurement processes at the start of the project. But it took a long while.*

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A minority female owner of a professional services company reported that oftentimes prime contractors do not adhere to the payment terms in the subcontract:

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*There have been times that despite the payment terms in our subcontract, prime contractors are still late beyond the payment terms. This impacts our cash flow in a negative way.*

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A Caucasian female owner of an engineering and professional services company reported that late payments have had the most significant negative impact on the success of her business:

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*Our biggest challenge is getting paid in a timely manner. We're usually a subconsultant on MSD projects. We have some contracts where we waited six months plus to get paid. Sometimes our prime consultant has not submitted invoices to MSD for months. We think our invoice has gone through the pipeline, and we are going to get paid within a couple months. Sometimes the issue is with MSD, and other times it is due to the prime consultant. If we don't get paid from*



*our prime consultants, we don't get paid as an employee either. That's basically how it works. We pay everyone else on our staff before we pay ourselves.*

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A minority male owner of a construction company described how late payments negatively impacts his profit margin:

*One thing MSD really needs to do a better job of is paying their vendors on time. If I don't get paid on time, I can't pay my material men. I must dip into my line of credit to meet payroll and other responsibilities. Then the cost of borrowing money must be factored into the bidding process because MSD does not pay on time.*

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### **G. Comments about MSD's Supplier Diversity Program**

The interviewees reported on their experiences with MSD's Supplier Diversity Program. Recommendations to enhance the program were offered as well.

A Caucasian female owner of an engineering and professional services company reported that the Supplier Diversity Program has significantly contributed to the success of her business:

*We do quite a bit of work through Louisville MSD. But if it wasn't for the Diversity Program we would have a very hard time getting work with them. We are a very small firm, so trying to compete with those larger companies is very difficult. I would hope that the program doesn't go away because there are a lot of small businesses that need that program. If it wasn't for MSD, there would be no way we could compete to get work against these larger firms. They would just blow over us every time. So, in my mind, I hope the program stays in place.*

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A minority male owner of a materials and commodities company believes the MSD's Supplier Diversity Program is beneficial because of its commitment to diversify the pool of utilized contractors:

*MSD's Diversity Program has always had some teeth in it. They strive strongly to get legitimate M/WBE participation. It seems like they are always at the forefront trying to be inclusive on all their contracts. We are certified with the National Minority Supplier Development Council.*

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A Caucasian female owner of an engineering and professional services company also expressed appreciation for MSD's commitment to diversify its pool of contractors:

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*I think it's great that MSD, a large municipal agency, is trying to have diversity in their suppliers. We have not had any challenges with MSD's Supplier Diversity Program.*

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A minority male owner of a construction company credits MSD's Supplier Diversity Program for the solvency of many MBE firms:

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*Minority businesses are able to operate because of the opportunities created by the Supplier Diversity Program. So, the program creates value.*

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A minority male owner of an engineering and professional services company explained why he believes the Supplier Diversity Program is needed:

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*The Supplier Diversity Program gives minority and woman-owned firms opportunities to participate on MSD projects that they probably wouldn't have otherwise. The Supplier Diversity Program is a vehicle for minorities and women to work on projects with MSD. It is a great benefit to the City of Louisville and to minority businesses. I know, as an engineer, it has been very good for us.*

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A Caucasian female owner of a construction firm recommends creating M/WBE goals on specialty trades:

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*If Louisville MSD goes forward with M/WBE goals, I would like to see them consider rehab work as a specialty construction area as part of their goals. It should be treated differently and have a specific goal.*

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A minority male owner of an engineering and professional services company believes that the Supplier Diversity Program is beneficial because it is an effective communication tool for minority business owners:

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*MSD encourages prime contractors to do their due diligence to work with minority or woman-owned firms. They don't compromise on the quality of the program, and [name withheld] has a good relationship with most of the vendors in the immediate area.*

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A minority male owner of a construction company believes that MBE firms would struggle to survive if it were not for the Supplier Diversity Program:

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*Small minority-owned companies like mine will have a hard time surviving if it wasn't for diversity programs. If they go away, the larger companies put a lot of the smaller companies out of business.*

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A Caucasian female owner of a construction company reported that she hopes MSD reinstates M/WBE goals as part of its Supplier Diversity Program:

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*I know that MSD had goals on their contracts. The goals were suspended, and I hope this study will give them the justification to reinstate the M/WBE goals. The goals are needed because typically MBE and WBE firms are smaller organizations, and the goals gives us an opportunity to perform work in the local community.*

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A minority male owner of a professional services company believes the Supplier Diversity Program is needed to introduce M/WBEs to MSD decision makers:

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*I heard about MSD's Supplier Diversity Program through the TriState Minority Supplier Development Council. The program tries to connect MSD to certified M/WBEs. From what I've learned from participating in events over the last ten years, I believe there is still a need for the program.*

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A minority female owner of an engineering and professional services company explained why she believes good faith efforts are not effective:

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*I would like to say that prime vendors should be required to meet their participation goals. But if there are no provisions embedded in the requirement, then the Supplier Diversity Program will not yield much. I feel that it should be made clear as to whether a prime bid is responsive if the participation goals have not been met. I don't believe in good faith efforts because my experience is that historically some prime vendors are not always comprehensive in their outreach to M/WBEs. I believe that if good faith efforts are required, the prime vendors should be very clear as to what are acceptable good faith efforts. But I personally don't believe in good faith efforts. I think it's a way for prime vendors to get a waiver.*

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A minority male owner of a materials and commodities services company believes that the Supplier Diversity Program has grown to be very effective:

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*I feel like the Supplier Diversity Program is a dog and pony show. There is a lot of rhetoric and not a lot of action. But it does seem like MSD is trying to create more opportunities for M/WBEs.*

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A Caucasian female owner of a professional services company explains why she has not benefitted from the Supplier Diversity Program:

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*The Supplier Diversity Program has not been valuable to us because no opportunities have resulted from it. I don't believe that there is really a push for supplier diversity at MSD when it comes to IT work. We can't find any opportunities, and no one has reached out to us. I don't know the last time I had a visit from anybody from MSD. It has been at least four or five years ago. But our main challenge is the fact that we have not had any opportunities through MSD's Supplier Diversity Program. It wasn't worth us spending the time to keep getting recertified.*

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A minority female owner of an engineering and professional services company believes the Supplier Diversity Program was more effective years ago:

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*The Supplier Diversity Program doesn't seem to be as strong as it was a few years ago. And by a few years, I'm talking about five to seven years ago. There used to be good opportunities for us to be involved in regarding their green infrastructure and demonstration projects. At that time, it was valuable to us in terms of work. But all of that went on a hold for several years. I think Louisville MSD is going through its own challenges that are above and beyond diversity. But I think that they are starting to get back on track. I personally hope that there will be more opportunities for M/WBEs.*

---

A minority male owner of an engineering and professional services company does not believe the Supplier Diversity Program has been beneficial for his small company:

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*I don't think the program is valuable. We haven't been able to get work like the program is intended to provide.*

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A minority male owner of a construction company believes that the Supplier Diversity Program could be improved by creating more opportunities for M/WBEs:

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*The Supplier Diversity Program will get you in the door. But we still see mainstream companies getting most of the opportunities to grow and change their businesses. I get frustrated, and I have scratched my head over the years because I have joined the chambers, gone to meetings, paid money for certifications, and I haven't gotten any work. When you look at the minority contractors, we are all in the same place scratching our head so it's not just me. There needs to be more advocacy on behalf of M/WBEs.*

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A minority male owner of a construction company believes the Supplier Diversity Program needs stronger authority to increase the participation of M/WBEs on MSD's contracts:

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*MSD's Supplier Diversity Program does not have the kind of teeth needed to get minorities contracting opportunities. They need to have some kind of enforcement to make sure that the goals are met because prime contractors will not put forth an honest good faith effort. I'd love my M/WBE certification if it worked to my advantage. When it comes to the minority certification, I get very little from it.*

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A minority male owner of an engineering and professional services company also spoke highly of MSD's Supplier Diversity Office:

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*My experience with the Supplier Diversity Office and the leadership team at MSD is very nice. They are very hospitable and understanding.*

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A minority female owner of an engineering and professional services company reported on the helpful assistance she received from MSD's Supplier Diversity Office:

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*[Name withheld] is always very helpful. She is a very straight shooter, and she get things done. She works in the Supplier Diversity Office.*

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A minority female owner of an engineering and professional services company recommends that MSD secure financial assistance resources for M/WBEs:

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*I think more financial assistance is needed form M/WBEs. I think the role of the supplier diversity arm of MSD is to help small businesses connect with banking institutions to assist those businesses. But I think MSD needs to take the lead. Their Supplier Diversity Program should focus on identifying financial assistance resources for M/WBEs.*

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A Caucasian female owner of an engineering and professional services company spoke highly of MSD's Supplier Diversity Office:

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*The staff in the Supplier Diversity Office have been very supportive. I also like their special outreach events. I feel genuine support from that office. I appreciate them taking care of the little guy.*

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A minority male owner of an engineering and professional services company commended MSD's Supplier Diversity Office for the assistance he received:

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*We went to the Supplier Diversity Office to get an idea of what opportunities are available for a firm like ours. It was a very open and very honest conversation. They said the opportunities would be available to us if we got certified as a M/WBE. They were very helpful in that process. [Name withheld] was instrumental in helping us seek work with MSD. We were hired to do manhole inspections for Louisville MSD. We got the contract as a prime contractor based on our track record in other markets. We performed the work, and we did it very well. We finished well ahead of schedule.*

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A minority male owner of a construction company explained why being a M/WBE-certified company is not beneficial for most M/WBEs:

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*I believe that they are just going through the motions to identify MBEs and WBEs to win the bids and once they are awarded the contract the MBE or WBE is never contacted to do the work. The prime contractor basically self-performs the work.*

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A Caucasian male owner of a construction company explained why he believes the Supplier Diversity Program is not cost effective for MSD:

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*M/WBE goals drives up our price because we can't can do the concrete work ourselves. We could do it a lot be cheaper which would save money for MSD in the long run.*

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#### **H. MSD's Exemplary Practices**

Many business owners credited the work they received from MSD for growing their small business. Businesses have lauded MSD management practices as important in their gaining access to contracting opportunities.

A minority male owner of a materials and commodities company reported that he has worked on many MSD projects:

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*We have had multiple successful projects with MSD. I could give you a list of current and past projects. We haven't had any detrimental issues with MSD whatsoever. The staff at MSD has always recognized us as a legitimate business, not just an MBE. We have never been treated unfairly.*

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A Caucasian female owner of an engineering and professional services company routinely attended MSD's networking events:

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*I like their meet-and-greet meetings every year. I believe it is in April every year.*

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A minority male owner of an engineering and professional services company also attends MSD's networking events and has worked successfully on many MSD projects:

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*I like their networking meetings. I have attended several of their events and found them very helpful. It is great to meet people from other utility agencies that are similar to MSD. We have probably worked on 30 or more projects with MSD. There have not been any issues whatsoever. Most of our invoices are paid in a reasonable amount of time. But there are some occasional times that they do not get paid for what seems like a while. [Name withheld] is always helpful, and she lets me know about upcoming contracting opportunities. Everybody at MSD treats me very well.*

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A Caucasian female owner of an engineering and professional services company was awarded an MSD contract that was renewed several times:

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*We were awarded a contract that was renewed for several years with a slight percentage rate increase. So, that was a very positive thing for us.*

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A minority male owner of a construction company reported that he had positive experiences working on an MSD project:

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*I haven't had a negative experience working with MSD. We have been able to perform the services as requested, and they were happy with what we've delivered.*

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A minority male owner of an engineering and professional services company reported that he has not encountered any issues as a subconsultant on MSD projects:

---

*It has been good working with MSD. We've worked through many prime consultants. And they all have been very positive. I have not had any problems with anyone at MSD, it's been a good working relationship.*

---

A minority male owner of a construction company explained the benefits he receives attending MSD's networking events:

---

*They do a lot of community outreach events. We get introduced to the prime contractors at these meetings, which is a good thing.*

---



A minority male owner of a construction company described the helpful assistance he received from MSD staff:

---

*I have a good relationship with MSD. I have received several service contracts. The staff at MSD is always willing to answer any questions. If I have any concerns or questions, I could call them for help. If they don't know the answer, they point me in the right direction.*

---

A Caucasian female owner of a construction company has been successful in securing work from MSD at the prime contract level:

---

*Most of our experiences with MSD have been positive. We bid the work, and we got the job. We have good relationships with project managers, and our only issue is getting paid timely.*

---

A Caucasian female owner of a construction company reported on a positive relationship she developed with MSD staff:

---

*I had several meetings and discussions with [name withheld] at MSD. She has always been as helpful as she can be within the framework of MSD. I don't mind saying her name because I feel like we have a very good relationship.*

---

A minority male owner of an engineering and professional services company credits MSD for providing opportunities that have helped grow his business:

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*MSD has opened doors for my business. We are a highly respected local firm regardless of our minority status. We are a highly regarded by MSD.*

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### **I. Recommendations to Enhance MSD's Procurement Standards**

The interviewees provided recommendations to enhance and expand MSD's procurement standards to make them more transparent and efficient.

A minority male owner of a materials and commodities services company recommends an expedited payment program:

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*I would suggest a fast-pay program especially for small MBEs that are trying to grow their business.*

---



A Caucasian female owner of an engineering and professional services company recommends a requirement to verify that subcontractors have been paid:

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*MSD should verify that whether subcontractors received payment on their projects. They could also do more networking events with personnel at MSD, so we can meet the decision makers.*

---

A minority male owner of an engineering and professional services company recommends an expedited payment program and reduced insurance requirements:

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*I would recommend a two-week turnaround on payments instead of 30-day timeframe for small businesses. Once the prime contractor gets paid, small businesses should get paid quickly thereafter. They also need to reduce their insurance requirements. It is a huge cost for us to meet the insurance requirements. More so than our larger competitors.*

---

A minority male owner of a construction company recommends financial assistance programs for M/WBEs:

---

*To build the capacity of M/WBEs, MSD should partner with financial institutions so small business can get a line-of-credit at a lower rate. It would be great if they could setup something like that for the small businesses.*

---

A Caucasian female owner of a construction company recommends that MSD facilitate access to financial assistance, create contracting opportunities for M/WBEs on its small purchases, and institute an efficient invoice payment system:

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*It would be helpful if there was assistance where banks would extend credit to M/WBEs to cover mobilization costs. When you're first getting started, it takes a lot of money to support a project and there is always a lag in payment. So, this would be very beneficial. I also suggest more outreach meetings. There are a lot of companies complaining that MSD's projects under \$20000 are not advertised, and they are given to friends and brothers. And another hurdle is getting paid on time. They should process invoices quicker because cashflow is certainly key for any MBE, WBE, or small business.*

---



A Caucasian female owner of an engineering and professional services company recommends separate MBE and WBE goals:

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*I think MSD should have specific goals for MBEs and WBEs. They should not lump us all into one big group. Otherwise we are left to fight amongst ourselves for work.*

---

A Caucasian female owner of an engineering and professional services company recommends a payment notification system for subcontractors:

---

*I wish there was something that would inform us when MSD remits payment to our prime contractors. It would be great to know the moment that the payment is released. We have worked on projects that have lasted several years, and we wait six months or longer to get paid.*

---

A minority male owner of an engineering and professional services company recommends more accountability on behalf of prime contractors to meet M/WBE goals and a quicker payment processing time:

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*If they implement goals, I believe that it's the responsibility of the prime contractor to make sure that the goals are met. There are M/WBEs out there that are available to do the work, it just takes some time and effort to make sure that they are solicited. They should be required to network with available certified firms to meet the goals. There should also be some mechanisms in place to assure that payments are being paid on time and not 120 to 180 days out.*

---

A minority male owner of a professional services company recommends payment of mobilization costs for M/WBEs on large projects:

---

*On large contracts, small businesses should be provided funding to help the WBE or MBE start the work on the project. This would be a tremendous help.*

---

A minority male owner of an engineering and professional services company recommends a payment verification program for subcontractors and financial assistance for M/WBEs:

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*MSD should institute something to reach out to M/WBEs to find out if they are being paid. They should verify that the subcontractors are being paid to keep prime contractors from pulling any shenanigans. There should also be some sort of referral or collaborative program with local financial institutions to help*



*M/WBEs get access to needed capital. This would help even the playing field for M/WBEs.*

---

A minority male owner of a construction company reported having trouble finding qualified minority subcontractors to work on his projects:

*As a general contractor, it is hard to find minority contractors that can perform the work. MSD has a lot of standards and guidelines, and a lot of minorities are not qualified. A lot of them have not done any subcontract work and are trying to work as a general contractor, but they never have done work for MSD.*

---

A Caucasian female owner of an engineering and professional services company recommends that the MSD consider a more efficient way of disseminating information regarding upcoming contracting opportunities:

*One of the main challenges that we face is the fact that we have not had any opportunities through MSD. But we keep getting recertified. If they want to improve supplier diversity involvement, then it starts with notifying MBEs or WBEs of the contracting opportunities or by making it easier for us to find the opportunities. If you go to their website, you will find that it's very difficult to find contracting opportunities.*

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### **III. Summary**

The business owners described both barriers and exemplary practices they experienced while working with or seeking work from MSD. The interviewees were identified from business community meetings, certification directories, and outreach efforts. The anecdotes were solicited through in-depth, one-on-one interviews and focus groups and during the public comment period at the community meetings.

The interviewees referenced barriers created by MSD managers and inspectors, bid shopping by prime contractors, the “good old boy” network, bonding and insurance requirements, and delays in receiving payment. They commended the mission and services of MSD’s Supplier Diversity Program. Interviewees also offered recommendations to enhance MSD’s procurement standards and its fulfillment of the Supplier Diversity Program’s mission. This anecdotal information, together with the statistical findings, will inform the writing of *Chapter 11: Recommendations*.



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# CHAPTER 10: Regression Analysis

## I. Introduction

Private sector business practices are not subject to the same legal standards as a local agency's minority and woman business enterprise (M/WBE) program. However, private sector business practices are indicators of marketplace conditions that could adversely affect the formation and growth of M/WBEs. The federal courts have acknowledged the effect of discriminatory private sector marketplace conditions on the utilization and availability of M/WBEs.

The Tenth Circuit, in *Concrete Works of Colorado v. City and County of Denver (Concrete Works III)*<sup>358</sup> set forth the proposition that discrimination in private-sector business practices can depress the availability of M/WBEs. In *Kossmann Contracting Company, Inc. v. City of Houston (Kossmann)*, the Fifth Circuit found that discriminatory experiences in the private sector, which are not subject to race- or gender-conscious goals, are evidence of the marketplace conditions that would prevail in government contracting without race and gender remedies.<sup>359</sup> *Kossmann* referenced the analysis of the United States Census Public Use Microdata Sample (PUMS) to apply the concept of unremediated markets data as evidence of private sector discrimination. The court used the City of Houston's (City) finding of unremediated discrimination to justify the application of its M/WBE Program's construction subcontract goals to ethnic and gender groups that were not documented as underutilized on the City's contracts at a statistically significant level. The two groups to which the unremediated discrimination argument was applied were, in fact, overutilized on the City's contracts but subject to discrimination in the unremediated markets.

To determine that there is unremediated discrimination in the private sector within the Louisville and Jefferson County Metropolitan Sewer District's (MSD) market area, the regression analyses examined two outcome variables — business ownership and business earnings. PUMS was used to compare the probability of minority males, minority females, and Caucasian females owning a business to the probability of Caucasian males owning a business. Logistic regression, using PUMS, determined if race and gender had a statistically significant impact on the probability of business ownership. PUMS was also used to compare the business earnings of M/WBEs to Caucasian males. Ordinary Least Squares (OLS) regression was utilized to analyze PUMS for disparities in owner-reported incomes when controlling for race and gender-neutral factors.

Each regression analysis compared minority group members<sup>360</sup> and Caucasian females to similarly situated Caucasian males by controlling for race and gender-neutral explanatory variables, such as age, education, marital status, and access to capital. The findings present the impact of the explanatory variables on the outcome variables. These findings also elucidate the socioeconomic

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<sup>358</sup> *Concrete Works of Colo., Inc. v. Denver*, 86 F. Supp. 2d 1042, 1057-61 (D. Colo. 2000); *rev'd on other grounds*, 321 F.3d 950 (10th Cir. 2003), *cert. denied*, 540 U.S. 1027 (2003) ("*Concrete Works III*").

<sup>359</sup> *Kossmann Contr. Co. v. City of Houston, Tx.* 128 F. Supp. 376 (2005).

<sup>360</sup> Minority group members include both males and females.



conditions in MSD’s market area that could adversely impact the relative availability of M/WBEs and non-minority male-owned businesses. In the event there is a finding of private sector discrimination, the evidence would indicate that discrimination would prevail in the award of MSD’s contracts in the absence of its MWBE goals.

The applicable limits of the private sector discrimination findings are set forth in *Builders Association of Greater Chicago v. City of Chicago (City of Chicago)*.<sup>361</sup> The court established that even when there is evidence of private sector discrimination, the findings cannot be used as the factual predicate for a government-sponsored, race-conscious M/WBE program unless there is a nexus between the private sector data and the public agency actions. The private sector findings, however, can be used to develop race-neutral programs to address barriers to the formation and development of M/WBEs. Given the case law, one must exercise caution in the interpretation and application of these regression findings. Case law regarding the application of private sector discrimination is discussed below.

## **II. Legal Analysis**

### **A. Passive Discrimination**

The controlling legal precedent is set forth in *City of Richmond v. J.A. Croson Co. (Croson)* decision, where the United States Supreme Court authorized state and local governments to remedy discrimination in the award of subcontracts by prime contractors on the grounds that the government is a “passive participant” in such discrimination<sup>362</sup>. In January 2003, *Concrete Works IV*<sup>363</sup> and *City of Chicago*<sup>364</sup> extended the scope private sector analysis to include the investigation of discriminatory barriers that M/WBEs encountered in the formation and development of businesses and the consequences of state and local remedial programs. *Concrete Works IV* set forth a framework for considering such private sector discrimination as a passive participant model for analysis. However, the obligation of presenting an appropriate nexus between the government remedy and the private sector discrimination was first addressed in *City of Chicago*.

The Tenth Circuit decided in *Concrete Works IV* that business activities conducted in the private sector, if within the government’s market area, are also appropriate areas to explore the issue of passive participation in private sector discrimination.<sup>365</sup> Given the finding of private sector discrimination, however, the appropriateness of the City of Denver’s remedy was not at issue before the court. The question before the court was whether or not sufficient facts existed to determine if the private sector business practices under consideration constituted discrimination.

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<sup>361</sup> *Builders Ass’n of Greater Chicago v. Chicago*, 298 F. Supp. 2d 725 (N.D. Ill. 2003).

<sup>362</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 492 (1989).

<sup>363</sup> *Concrete Works of Colo., Inc. v. Denver*, 321 F.3d 950, 965-69 (10th Cir. 2003) (“*Concrete Works IV*”).

<sup>364</sup> *City of Chicago*, 298 F. Supp. 2d at 738-39.

<sup>365</sup> *Concrete Works IV*, 321 F.3d at 966-67.



For technical legal reasons,<sup>366</sup> the court did not examine if a consequent public-sector remedy that involved a goal requirement on the City of Denver’s contracts was “narrowly tailored” or otherwise supported by the City of Denver’s private sector findings of discrimination.

## **B. Narrow Tailoring**

The question of whether a particular public-sector remedy is narrowly tailored when it is based solely on business practices within the private sector was at issue in *City of Chicago*. Decided ten months after *Concrete Works IV*, *City of Chicago* found that certain private sector business practices constituted discrimination against minorities in the Chicago, Illinois market area. However, the district court did not find the City of Chicago’s M/WBE subcontracting goal to be a “narrowly tailored” remedy to address the documented private sector discriminatory business practices that had been discovered within the City of Chicago’s market area.<sup>367</sup> The court explicitly stated that certain discriminatory business practices documented by regression analyses constituted private sector discrimination.<sup>368</sup> It is also notable that the documented discriminatory business practices reviewed by the court in *City of Chicago* were similar to those reviewed in *Concrete Works IV*. Notwithstanding the fact that discrimination in the City of Chicago’s market area was documented, the court determined that the evidence was insufficient to support the City of Chicago’s race-based subcontracting goals<sup>369</sup> and issued an injunction against the program.<sup>370</sup>

The following statements from that opinion are noteworthy:

Racial preferences are, by their nature, highly suspect, and they cannot be used to benefit one group that, by definition, is not either individually or collectively the present victim of discrimination . . . There may well also be (and the evidence suggests that there are) minorities and women who do not enter the industry because they perceive barriers to entry. If there is none, and their perception is in error, that false perception cannot be used to provide additional opportunities to M/WBEs already in the market to the detriment of other firms who, again by definition, neither individually nor collectively, are engaged in discriminatory practices.<sup>371</sup>

Given these distortions of the market and these barriers, is the City’s program narrowly tailored as a remedy? It is here that I believe the program fails. There is no “meaningful individualized review” of M/WBEs. *Gratz v. Bollinger*, 539 U.S. 244, 156 L. Ed. 2d 257, 123 S.Ct. 2411, 2431 (2003) (Justice O’Connor concurring). Chicago’s program is more expansive and more rigid than plans that have been sustained in the courts. It has no termination date, nor has it any means for determining a termination date. The “graduation” revenue amount is very high, \$27,500,000, and very few have graduated. There is no net worth threshold. A third-generation Japanese-American from a wealthy family, with a graduate degree from MIT, qualifies (and an Iraqi immigrant does not). Waivers are rarely or never granted on construction contracts, but “regarding flexibility, ‘the availability of

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<sup>366</sup> Plaintiff had not preserved the issue on appeal. Therefore, it was no longer part of the case.

<sup>367</sup> *City of Chicago*, 298 F. Supp. 2d at 739.

<sup>368</sup> *Id.* at 731-32.

<sup>369</sup> *Id.* at 742.

<sup>370</sup> *Id.*

<sup>371</sup> *Id.* at 734-35.



waivers' is of particular importance . . . a 'rigid numerical quota' particularly disservices the cause of narrow tailoring." *Adarand Constructors v. Slater, supra*, at 1177. The City's program is a "rigid numerical quota," a quota not related to the number of available, willing, and able firms but to concepts of how many of those firms there should be. Formalistic points did not survive strict scrutiny in *Gratz v. Bollinger, supra*, and formalistic percentages cannot survive scrutiny.<sup>372</sup>

The district court in *City of Chicago* found that private-sector discrimination cannot be used as the factual basis for a government-sponsored, race-based M/WBE program without a sufficient nexus to the government's actions. Therefore, the discrimination that might be revealed in this regression analysis will not be sufficient factual predicate for MSD to establish a race-based M/WBE program since a nexus cannot be established between MSD and private-sector data. But the economic indicators revealed in this regression analysis illustrate private-sector discrimination and can support MSD sponsored race-neutral programs.

### **III. Regression Analysis Methodology**

The two regression analyses focus on the construction, construction-related services, engineering and professional services, and materials and commodities (including non-professional) services (hereinafter referred to as materials and commodities) industries. The datasets used for the regression analyses did not allow for an exact match of the industries used in the MSD M/WBE Disparity Study (Study). Therefore, the industries were selected to most closely mirror the four industries used in the Study.

As noted, two separate regression analyses were conducted—the Business Ownership Analysis and the Business Earnings Analysis.<sup>373</sup> These analyses take into consideration race- and gender-neutral factors, including age, education, and creditworthiness, to assess the situation of minorities and Caucasian females compared with similarly situated Caucasian males.

### **IV. Datasets Analyzed**

The 2010 to 2014 PUMS produced by the United States Census Bureau was used to analyze business ownership and business earnings within the service area for MSD that is determined to be the geographical boundaries of Jefferson County, Kentucky. The 2010 to 2014 PUMS represents the most recent data matching the July 1, 2010, to June 30, 2015 study period. The data for Jefferson County, Kentucky, was identified using Public Use Microdata Areas (PUMAs) variables within the PUMS. The PUMAs reports data for segmented areas within counties and states. The dataset includes information on personal profile, industry, work characteristics, and family structure. PUMS allowed for an analysis by an individual's race and gender.



<sup>372</sup> *City of Chicago*, 298 F.Supp.2d at 739-40.

<sup>373</sup> Detailed description of the steps taken to clean and merge data are listed in *Regression Analysis Technical Appendix*.

## V. *Regression Models Defined*

### A. *Business Ownership Analysis*

The Business Ownership Analysis examines the relationship between the likelihood of being a business owner and independent socioeconomic variables. The dependent variable—business ownership—includes business owners of incorporated and unincorporated firms. The business ownership variable utilizes two values. A value of “1” indicates that a person is a business owner, and a value of “0” indicates that a person is not a business owner. When the dependent variable is defined this way, it is called a binary variable. Using this methodology, a logistic regression model is utilized to predict the likelihood of business ownership using independent socioeconomic variables. Three logistic models were run to predict the probability of business ownership in each of the three industries examined in the Study. Categories of the independent variables analyzed include educational level, citizenship status, personal characteristics, and race/gender.

In Tables 10.3 to 10.6, a finding of disparity is denoted by an asterisk (\*) when the independent variable is significant at or above the 95% confidence level ( $p < 0.05$ ). A finding of disparity indicates that there is a non-random relationship between the probability of owning a business and the independent variable. The regression results tables indicate the sign of each variable’s coefficient from the regression output. If the coefficient sign is positive, it indicates that there is a positive relationship between the dependent and independent variables. For example, having an advanced degree is positively related to the likelihood of being a business owner, holding all other variables constant. If the coefficient sign for the independent variable is negative, this implies an inverse relationship between the dependent and independent variables. For example, an individual with children under the age of six has a lower likelihood of owning a business, holding all other variables constant.

For each of the four industries, the logistic regression is used to identify the likelihood that an individual owns a business given his or her background, including race, gender, and race and gender-neutral factors. The dependent variables in all regressions are binary variables coded as “1” for individuals who are self-employed and “0” for individuals who are not self-employed.<sup>374</sup> Table 10.1 presents the independent variables used for the Business Ownership Analysis.

**Table 10.1: Independent Variables Used for the Business Ownership Analysis**

<b>Personal Characteristics</b>	<b>Educational Attainment</b>	<b>Ethnicity</b>	<b>Gender</b>
Age	Bachelor's Degree	Caucasian American	Female
Age-squared	Advanced Degree	African American	
Home Ownership		Asian American	
Home Value		Hispanic American	
Monthly Mortgage Payment		Native American	
Interest and Dividends		Other Minority*	

<sup>374</sup> Note: The terms “business owner” and “self-employed” are used interchangeably throughout this chapter.



Personal Characteristics	Educational Attainment	Ethnicity	Gender
Language Spoken at Home			
A Child Under the Age of Six in the Household			
Marital Status			

(\*) Other Minority includes individuals who belong to two or more racial groups.

## ***B. Business Earnings Analysis***

The Business Earnings Analysis examines the relationship between the annual self-employment income and independent socioeconomic variables. “Wages” are defined as the individual’s total dollar income earned in the previous 12 months. Categories of independent socioeconomic variables analyzed include educational level, citizenship status, personal characteristics, business characteristics, and race/gender.

All of the independent variables are regressed against wages in an OLS regression model. The OLS model estimates a linear relationship between the independent variables and the dependent variable. This multivariate regression model estimates a line similar to the standard  $y=mx+b$  format, but with additional independent variables. The mathematical purpose of a regression analysis is to estimate a best-fit line for the model and assess which findings are statistically significant.

In Tables 10.8 to 10.11, a finding of disparity is denoted by an asterisk (\*) when an independent variable is significant at or above the 95-percent confidence level. A finding of disparity indicates that there is a non-random relationship between wages and the independent variable. The regression results tables indicate the sign of each variable’s coefficient from the regression output. If the coefficient sign is positive, it means there is a positive relationship between the dependent and independent variables. For example, if age is positively related to wages, this implies that older business owners have higher business earnings, holding all other variables constant. If the coefficient sign for the independent variable is negative, this implies an inverse relationship between the dependent and independent variables. For example, if the coefficient for having a child under the age of six is negative, this implies that business owners with children under the age of six have lower business earnings.

An OLS regression analysis is used to assess the presence of business earning disparities. OLS regressions have been conducted separately for each industry. Table 10.2 presents the independent variables used for the Business Earnings Analysis.<sup>375</sup>



<sup>375</sup> If an independent variable is a binary variable, it will be coded as “1” or “0” if the individual has that variable present (i.e. for the Hispanic American variable, it is coded as “1” if the individual is Hispanic American and “0” if not). If an independent variable is a continuous variable, that variable will be used (i.e. one’s age can be labeled as 35).

**Table 10.2: Independent Variables Used for the Business Earnings Analysis**

<b>Personal Characteristics</b>	<b>Educational Attainment</b>	<b>Ethnicity</b>	<b>Gender</b>
Age	Bachelor's Degree	Caucasian American	Female
Age-squared	Advanced Degree	African American	
Incorporated Business		Asian American	
Home Ownership		Hispanic American	
Home Value		Native American	
Monthly Mortgage Payment		Other Minority*	
Interest and Dividends			
Language Spoken at Home			
A Child Under the Age of Six in the Household			
Marital Status			

(\*) Other Minority includes individuals who belong to two or more racial groups.

## **VI. Findings**

### **A. Business Ownership Analysis**

The business ownership variable is defined by the number of self-employed individuals in each of the four industries: construction, construction-related services, engineering and professional services, and materials and commodities. The analysis considered incorporated and unincorporated businesses. The data in this section came from Jefferson County, Kentucky, which were specified using PUMAs.<sup>376</sup> As noted in *Section IV*, because each PUMA is determined by the United States Census, the region analyzed in the regression analyses could be limited to Jefferson County, Kentucky.

Previous studies have shown that many non-discriminatory factors, such as education, age, and marital status, are associated with self-employment. In this analysis, race and gender-neutral factors are combined with race and gender-specific factors in a logistic regression model to determine if observed race or gender disparities are independent of the race and gender-neutral factors known to be associated with self-employment. It must be noted that many of these variables, such as having an advanced degree, while seeming to be race and gender-neutral, may actually be correlated with race and gender.

For example, if Caucasian females are less likely to have advanced degrees and the regression results show that individuals with advanced degrees are significantly more likely to own a business, Caucasian females may be disadvantaged in two ways. First, Caucasian females may have statistically significant lower business ownership rates, so they face a direct disadvantage as



<sup>376</sup> Public Use Microdata Areas (PUMAs) are statistical geographic areas defined for the dissemination of Public Use Microdata Sample (PUMS) data. The PUMS data were collected by the United States Census Bureau from a five-percent sample of United States households. The observations were weighted to preserve the representative nature of the sample in relation to the population as a whole.

a group. Second, they are indirectly disadvantaged as fewer of them tend to have advanced degrees, which significantly increase one's chances of owning a business.

### 1. Logistic Model Results for Construction Business Ownership

Table 10.3 presents the logistic regression results for the likelihood of owning a business in the construction industry based on the 21 variables analyzed in this model.

**Table 10.3: Construction Industry Logistic Model**

<b>Business Ownership Model</b>	<b>Coefficient</b>	<b>Significance</b>	<b>Standard Error</b>	<b>Z-score</b>	<b>P&gt; z </b>
Age	0.133160	*	0.039705	3.35	0.001
Age-squared	-0.001134	*	0.000399	-2.84	0.005
Bachelor's Degree (a)	0.059515		0.244112	0.24	0.807
Advanced Degree	0.192846		0.400356	0.48	0.630
Home Owner	0.275594		0.267831	1.03	0.303
Home Value	0.000001	*	0.000001	2.95	0.003
Monthly Mortgage Payment	-0.000028		0.000154	-0.18	0.855
Interest and Dividends	0.000000		0.000001	-0.07	0.947
Speaks English at Home	-0.066503		0.557928	-0.12	0.905
Has a Child under the Age of Six	-0.964042		1.126817	-0.86	0.392
Married	-0.243618		0.201932	-1.21	0.228
Caucasian Female (b)	-0.601263	*	0.279453	-2.15	0.031
African American	-0.138077		0.328339	-0.42	0.674
Asian American	-		-	-	-
Hispanic American	-0.912539		0.688995	-1.32	0.185
Native American	-		-	-	-
Other Minority	-0.707202		1.172318	-0.60	0.546
Year 2011 (c)	-0.033026		0.279303	-0.12	0.906
Year 2012	0.244940		0.313318	0.78	0.434
Year 2013	-0.095329		0.300593	-0.32	0.751
Year 2014	0.047013		0.279835	0.17	0.867
Constant	-4.609668	*	1.157215	-3.98	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is Year 2010.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

(-) denotes a variable with too few available data to determine statistical significance.



The construction industry logistic regression results indicate the following:<sup>377</sup>

- The likelihood of construction business ownership is positively associated with increased age. Older individuals are significantly more likely to be business owners in the construction industry. However, as individuals age, the likelihood of being a business owner significantly decreases in the construction industry.
- Individuals with higher-valued homes are significantly more likely to be business owners in the construction industry.
- Caucasian females are significantly less likely to be business owners in the construction industry than Caucasian males.
- African Americans, Hispanic Americans, and other minorities<sup>378</sup> are less likely to be business owners than Caucasian males in the construction industry, but this finding was not significant.

## **2. Logistic Model Results for Construction-related Services Business Ownership**

Table 10.4 presents the logistic regression results for the likelihood of owning a business in the construction-related services industry based on the 21 variables analyzed in this model.



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<sup>377</sup> For the Business Ownership Analysis, the results are presented for the age, education, race, and gender variables only.

<sup>378</sup> Other minorities include individuals who belong to two or more racial groups.

**Table 10.4: Construction-related Services Industry Logistic Model**

<b>Business Ownership Model</b>	<b>Coefficient</b>	<b>Significance</b>	<b>Standard Error</b>	<b>Z-score</b>	<b>P&gt; z </b>
Age	0.103273		0.088384	1.17	0.243
Age-squared	-0.000591		0.000910	-0.65	0.516
Bachelor's Degree (a)	-0.330833		0.423873	-0.78	0.435
Advanced Degree	-1.145068	*	0.520555	-2.20	0.028
Home Owner	0.037362		0.627715	0.06	0.953
Home Value	-0.000002		0.000001	-1.89	0.059
Monthly Mortgage Payment	0.000796	*	0.000317	2.51	0.012
Interest and Dividends	0.000003	*	0.000001	2.78	0.006
Speaks English at Home	-0.611417		0.943621	-0.65	0.517
Has a Child under the Age of Six	-0.543685		1.132365	-0.48	0.631
Married	0.816535		0.438255	1.86	0.062
Caucasian Female (b)	0.590862		0.460883	1.28	0.200
African American	-1.537006		0.827378	-1.86	0.063
Asian American	-		-	-	-
Hispanic American	-0.960857		0.955943	-1.01	0.315
Native American	-		-	-	-
Other Minority	-		-	-	-
Year 2011 (c)	0.766835		0.572914	1.34	0.181
Year 2012	0.092428		0.518173	0.18	0.858
Year 2013	0.406060		0.629803	0.64	0.519
Year 2014	0.663907		0.527132	1.26	0.208
Constant	-4.903695	*	2.266217	-2.16	0.030

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is Year 2010.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

(-) denotes a variable with too few available data to determine statistical significance.

The construction-related services industry logistic regression results indicate the following:<sup>379</sup>

- Individuals with an advanced degree are significantly less likely to be business owners in the construction-related services industry. Individuals with a bachelor's degree are less likely to be business owners in the construction-related services industry, but this finding was not significant.
- Individuals paying higher monthly mortgages are significantly more likely to be business owners in the construction-related services industry.



<sup>379</sup> For the Business Ownership Analysis, the results are presented for the age, education, race, and gender variables only.

- Individuals who have higher interest and dividends income are significantly more likely to be business owners in the construction-related services industry.
- Caucasian females are more likely to be business owners in the construction-related services industry than Caucasian males, but this finding was not significant.
- African Americans and Hispanic Americans are less likely to be business owners than Caucasian males in the construction-related services industry, but this finding was not significant.

### **3. Logistic Model Results for Engineering and Professional Services Business Ownership**

Table 10.5 presents the logistic regression results for the likelihood of owning a business in the engineering and professional services industry based on the 21 variables analyzed in this model.



**Table 10.5: Engineering and Professional Services Industry Logistic Model**

<b>Business Ownership Model</b>	<b>Coefficient</b>	<b>Significance</b>	<b>Standard Error</b>	<b>Z-score</b>	<b>P&gt; z </b>
Age	0.100801	*	0.034157	2.95	0.003
Age-squared	-0.000591		0.000329	-1.79	0.073
Bachelor's Degree (a)	0.666287	*	0.230703	2.89	0.004
Advanced Degree	1.218875	*	0.249477	4.89	0.000
Home Owner	-0.237437		0.266736	-0.89	0.373
Home Value	0.000001	*	0.000000	3.17	0.002
Monthly Mortgage Payment	0.000099		0.000125	0.79	0.430
Interest and Dividends	0.000001	*	0.000000	2.35	0.019
Speaks English at Home	-0.065284		0.496467	-0.13	0.895
Has a Child under the Age of Six	0.031645		0.404660	0.08	0.938
Married	0.256755		0.199539	1.29	0.198
Caucasian Female (b)	-0.578890	*	0.182330	-3.17	0.001
African American	-1.546262	*	0.463987	-3.33	0.001
Asian American	-0.930651		0.695269	-1.34	0.181
Hispanic American	0.039639		0.679886	0.06	0.954
Native American	-		-	-	-
Other Minority	0.991460		0.596397	1.66	0.096
Year 2011 (c)	-0.174739		0.253304	-0.69	0.490
Year 2012	-0.440997		0.250735	-1.76	0.079
Year 2013	-0.133490		0.250611	-0.53	0.594
Year 2014	-0.163780		0.258339	-0.63	0.526
Constant	-5.265112	*	1.010302	-5.21	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is Year 2010.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

(-) denotes a variable with too few available data to determine statistical significance.

The engineering and professional services industry logistic regression results indicate the following:<sup>380</sup>

- The likelihood of engineering and professional services business ownership is positively associated with increased age. Older individuals are significantly more likely to be business owners in the engineering and professional services industry. However, as individuals age, the likelihood of being a business owner decreases in the engineering and professional services industry, but this finding was not significant.
- Individuals with a bachelor's degree or an advanced degree are significantly more likely to be business owners in the engineering and professional services industry.



<sup>380</sup> For the Business Ownership Analysis, the results are presented for the age, education, race, and gender variables only.

- Individuals who have higher-valued homes are significantly more likely to be business owners in the engineering and professional services industry.
- Individuals who have higher interest and dividend income are significantly more likely to be business owners in the engineering and professional services industry.
- Caucasian females and African Americans are significantly less likely than Caucasian males to be business owners in the engineering and professional services industry.
- Asian Americans are less likely than Caucasian males to be business owners in the engineering and professional services industry, but this finding was not significant .
- Hispanic Americans and other minorities<sup>381</sup> are more likely than Caucasian males to be business owners in the engineering and professional services industry, but this finding was not significant.

#### **4. Logistic Model Results for Materials and Commodities Business Ownership**

Table 10.6 presents the logistic regression results for the likelihood of owning a business in the materials and commodities industry based on the 21 variables analyzed in this model.




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<sup>381</sup> Other minorities include individuals who belong to two or more racial groups.

**Table 10.6: Materials and Commodities Industry Logistic Model**

<b>Business Ownership Model</b>	<b>Coefficient</b>	<b>Significance</b>	<b>Standard Error</b>	<b>Z-score</b>	<b>P&gt; z </b>
Age	-0.041854		0.037987	-1.10	0.271
Age-squared	0.000617		0.000396	1.56	0.119
Bachelor's Degree (a)	-0.266945		0.258611	-1.03	0.302
Advanced Degree	-0.328846		0.477481	-0.69	0.491
Home Owner	1.071119	*	0.320233	3.34	0.001
Home Value	0.000001	*	0.000001	2.01	0.045
Monthly Mortgage Payment	0.000080		0.000191	0.42	0.675
Interest and Dividends	0.000001		0.000001	1.46	0.144
Speaks English at Home	-0.435741		0.536658	-0.81	0.417
Has a Child under the Age of Six	-0.589346		1.057571	-0.56	0.577
Married	0.045220		0.234154	0.19	0.847
Caucasian Female (b)	-0.957174	*	0.324365	-2.95	0.003
African American	-0.106477		0.343454	-0.31	0.757
Asian American	-1.636020		1.344117	-1.22	0.224
Hispanic American	-0.721569		0.863164	-0.84	0.403
Native American	-		-	-	-
Other Minority	-2.644516	*	1.098998	-2.41	0.016
Year 2011 (c)	0.050987		0.326610	0.16	0.876
Year 2012	0.043942		0.299341	0.15	0.883
Year 2013	-0.324086		0.269951	-1.20	0.230
Year 2014	-0.032370		0.312397	-0.10	0.917
Constant	-1.927243	*	0.932339	-2.07	0.039

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is Year 2010.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

(-) denotes a variable with too few available data to determine statistical significance.



The materials and commodities industry logistic regression results indicate the following:<sup>382</sup>

- Home owners are significantly more likely to be business owners in the materials and commodities industry.
- Individuals who have higher-valued homes are significantly more likely to be business owners in the materials and commodities industry.
- Caucasian females and other minorities<sup>383</sup> are significantly less likely than Caucasian males to be business owners in the materials and commodities industry.
- African Americans, Asian Americans, and Hispanic Americans are less likely to be business owners than Caucasian males in the materials and commodities industry, but this finding was not significant.

### ***B. Business Ownership Analysis Summary***

The Business Ownership Analysis examined the different explanatory variables' impact on an individual's likelihood of owning a business in the construction, construction-related services, engineering and professional services, and materials and commodities industries. Controlling for race and gender-neutral factors, the Business Ownership Analysis results show that statistically significant disparities in the likelihood of owning a business exists for minorities and Caucasian females compared to similarly situated Caucasian males.

Caucasian females are significantly less likely than similarly situated Caucasian males to own a business in the construction, engineering and professional services, and materials and commodities industries. African Americans are significantly less likely to own a business in the engineering and professional services industries. Other minorities are significantly less likely to own a business in the materials and commodities industry. Table 10.7 depicts the business ownership regression analysis results by ethnicity, gender, and industry.



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<sup>382</sup> For the Business Ownership Analysis, the results are presented for the age, education, race, and gender variables only.

<sup>383</sup> Other minorities include individuals who belong to two or more racial groups.

**Table 10.7: Statistically Significant Business Ownership Disparities**

<b>Ethnicity/Gender</b>	<b>Construction</b>	<b>Construction-related Services</b>	<b>Engineering and Professional Services</b>	<b>Materials and Commodities</b>
Caucasian Female	<i>Disparity</i>	No Disparity	<i>Disparity</i>	<i>Disparity</i>
African American	No Disparity	No Disparity	<i>Disparity</i>	No Disparity
Asian American	No Disparity	No Disparity	No Disparity	No Disparity
Hispanic American	No Disparity	No Disparity	No Disparity	No Disparity
Native American	No Disparity	No Disparity	No Disparity	No Disparity
Other Minority <sup>384</sup>	No Disparity	No Disparity	No Disparity	<i>Disparity</i>

**C. Business Earnings Analysis**

The business earnings variable is identified by self-employment income<sup>385</sup> from 2010 to 2014 for the four industries: construction, construction-related services, engineering and professional services, and materials and commodities. The analysis considered incorporated businesses.

Previous studies have shown that many non-discriminatory factors, such as education, age, and marital status are associated with self-employment income. In this analysis, race and gender-neutral factors are combined with race and gender groups in an OLS regression model to determine if observed race or gender disparities were independent of the race and gender-neutral factors known to be associated with self-employment income.

**5. OLS Regression Results in the Construction Industry**

Table 10.8 depicts the results of the OLS regression for business earnings in the construction industry based on the 22 variables analyzed in this model.



<sup>384</sup> Other minority includes individuals who belong to two or more racial groups.

<sup>385</sup> The terms “business earnings” and “self-employment income” are used interchangeably.

**Table 10.8: Construction Industry OLS Regression**

<b>Business Earnings Model</b>	<b>Coefficient</b>	<b>Significance</b>	<b>Standard Error</b>	<b>t-value</b>	<b>P&gt; t </b>
Age	2505.637	*	522.106	4.80	0.000
Age-squared	-24.598	*	5.748	-4.28	0.000
Incorporated Business	-11553.000		7485.709	-1.54	0.123
Bachelor's Degree (a)	22601.390	*	5323.417	4.25	0.000
Advanced Degree	33836.110	*	11594.170	2.92	0.004
Home Owner	-446.936		4803.481	-0.09	0.926
Home Value	0.083	*	0.025	3.25	0.001
Monthly Mortgage Payment	-1.341		3.412	-0.39	0.694
Interest and Dividends	-0.017		0.025	-0.67	0.503
Speaks English at Home	393.660		6781.061	0.06	0.954
Has a Child under the Age of Six	-4056.002		6763.780	-0.60	0.549
Married	5062.057		3242.496	1.56	0.119
Caucasian Female (b)	-14012.260	*	3738.408	-3.75	0.000
African American	-7891.596	*	3545.123	-2.23	0.026
Asian American	-2957.105		11549.740	-0.26	0.798
Hispanic American	316.275		7727.192	0.04	0.967
Native American	-		-	-	-
Other Minority	-24079.430	*	9136.193	-2.64	0.009
Year 2011 (c)	-5944.208		5368.906	-1.11	0.269
Year 2012	-8001.841		5338.259	-1.50	0.134
Year 2013	-6245.128		5321.600	-1.17	0.241
Year 2014	-4638.552		5432.232	-0.85	0.393
Constant	-25495.320		15210.150	-1.68	0.094

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is year 2010.

(P>|t|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

(-) denotes a variable with too few available data to determine statistical significance.



The OLS regression results for business earnings in the construction industry indicate the following:<sup>386</sup>

- Older business owners have significantly higher business earnings in the construction industry. However, as business owners age, they have significantly lower business earnings in the construction industry.
- Business owners with a bachelor’s degree or an advanced degree have significantly higher business earnings in the construction industry.
- Business owners who have higher-valued homes have significantly higher business earnings in the construction industry.
- Caucasian female, African American, and other minority<sup>387</sup> business owners have significantly lower business earnings than Caucasian males in the construction industry.
- Asian American business owners have lower business earnings than Caucasian males in the construction industry, but this finding was not significant.
- Hispanic American business owners have higher business earnings than Caucasian males in the construction industry, but this finding was not significant.

## 6. OLS Regression Results in the Construction-related Services Industry

Table 10.9 depicts the results of the OLS regression for business earnings in the construction-related services industry based on the 22 variables analyzed in this model.

**Table 10.9: Construction-related Services Industry OLS Regression**

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	2906.520	*	935.131	3.11	0.002
Age-squared	-23.660	*	10.228	-2.31	0.022
Incorporated Business	-5883.380		10048.030	-0.59	0.559
Bachelor's Degree (a)	9122.573		4781.540	1.91	0.058
Advanced Degree	34283.420	*	10077.760	3.40	0.001
Home Owner	3952.754		5709.526	0.69	0.489
Home Value	-0.025		0.020	-1.29	0.199
Monthly Mortgage Payment	19.248	*	7.581	2.54	0.012
Interest and Dividends	0.000		0.009	0.03	0.974
Speaks English at Home	-6298.394		14006.760	-0.45	0.653
Has a Child under the Age of Six	5281.089		8420.926	0.63	0.531
Married	13832.890	*	5000.918	2.77	0.006
Caucasian Female (b)	-9810.659		5897.031	-1.66	0.098

<sup>386</sup> For the Business Earnings Model, the results are presented for the age, education, race, and gender variables only.

<sup>387</sup> Other minority includes individuals who belong to two or more racial groups.



Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
African American	-18401.290	*	6432.498	-2.86	0.005
Asian American	-44377.650	*	20790.190	-2.13	0.034
Hispanic American	-30737.780		16846.280	-1.82	0.069
Native American	-25152.010		15354.450	-1.64	0.103
Other Minority	-17133.460		12383.480	-1.38	0.168
Year 2011 (c)	-2057.637		7012.460	-0.29	0.769
Year 2012	-9176.682		6490.346	-1.41	0.159
Year 2013	6047.469		7750.467	0.78	0.436
Year 2014	7683.031		11142.120	0.69	0.491
Constant	-53583.410		27628.320	-1.94	0.054

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is year 2010.

(P>|t|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.

The OLS regression results for business earnings in the construction-related services industry indicate the following:<sup>388</sup>

- Older business owners have significantly higher business earnings in the construction-related services industry. However, as business owners age, they have significantly lower business earnings in the construction-related services industry.
- Business owners with an advanced degree have significantly higher business earnings in the construction-related services industry. Business owners with a bachelor's degree have higher business earnings in the construction-related services industry, but this finding was not significant.
- Business owners paying higher monthly mortgages have significantly higher business earnings in the construction-related services industry.
- Married business owners have significantly higher business earnings in the construction-related services industry.
- African American and Asian American business owners have significantly lower business earnings than Caucasian males in the construction-related services industry.
- Caucasian female, Hispanic American, Native American, and other minority<sup>389</sup> business owners have lower business earnings than Caucasian males in the construction-related services industry, but this finding was not significant.



<sup>388</sup> For the Business Earnings Model, the results are presented for the age, education, race, and gender variables only.

<sup>389</sup> Other minority includes individuals who belong to two or more racial groups.

## 7. OLS Regression Results in the Engineering and Professional Services Industry

Table 10.10 depicts the results of the OLS regression for business earnings in the engineering and professional services industry based on the 22 variables analyzed in this model.

**Table 10.10: Engineering and Professional Services Industry OLS Regression**

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	4598.003	*	724.131	6.35	0.000
Age-squared	-46.577	*	8.325	-5.60	0.000
Incorporated Business	22247.960	*	8904.092	2.50	0.013
Bachelor's Degree (a)	15534.150	*	3266.931	4.75	0.000
Advanced Degree	40940.410	*	5968.814	6.86	0.000
Home Owner	-4548.452		4863.134	-0.94	0.350
Home Value	0.063	*	0.021	2.95	0.003
Monthly Mortgage Payment	14.137	*	3.805	3.72	0.000
Interest and Dividends	0.004		0.019	0.20	0.841
Speaks English at Home	26474.270	*	8828.375	3.00	0.003
Has a Child under the Age of Six	-3213.637		6668.932	-0.48	0.630
Married	-2595.559		3748.696	-0.69	0.489
Caucasian Female (b)	-15838.750	*	3560.889	-4.45	0.000
African American	-18455.760	*	4167.911	-4.43	0.000
Asian American	13330.890		11751.020	1.13	0.257
Hispanic American	3803.519		12612.840	0.30	0.763
Native American	-11469.320		14739.340	-0.78	0.437
Other Minority	-14011.520		7217.298	-1.94	0.052
Year 2011 (c)	6970.786		5817.867	1.20	0.231
Year 2012	1857.447		5061.916	0.37	0.714
Year 2013	3047.230		4794.925	0.64	0.525
Year 2014	8590.082		5212.134	1.65	0.100
Constant	-101290.000	*	17146.430	-5.91	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is year 2010.

(P>|t|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.



The OLS regression results for business earnings in the engineering and professional services industry indicate the following:<sup>390</sup>

- Older business owners have significantly higher business earnings in the engineering and professional services industry. However, as business owners age, they have significantly lower business earnings in the engineering and professional services industry.
- Incorporated business owners have significantly higher business earnings in the engineering and professional services industry.
- Business owners with a bachelor's or advanced degree have significantly higher business earnings in the engineering and professional services industry.
- Business owners who have higher-valued homes have significantly higher business earnings in the engineering and professional services industry.
- Business owners paying higher monthly mortgages have significantly higher business earnings in the engineering and professional services industry.
- Business owners speaking English at home have significantly higher business earnings in the engineering and professional services industry.
- Caucasian female and African American business owners have significantly lower business earnings than Caucasian males in the engineering and professional services industry.
- Native American and other minority<sup>391</sup> business owners have lower business earnings than Caucasian males in the engineering and professional services industry, but this finding was not significant.
- Asian American and Hispanic American business owners have higher business earnings than Caucasian males in the engineering and professional services industry, but this finding was not significant.



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<sup>390</sup> For the Business Earnings Model, the results are presented for the age, education, race, and gender variables only.

<sup>391</sup> Other minority includes individuals who belong to two or more racial groups.

## 8. OLS Regression Results in the Materials and Commodities Industry

Table 10.11 depicts the results of the OLS regression for business earnings in the materials and commodities industry based on the 22 variables analyzed in this model.

**Table 10.11: Materials and Commodities Industry OLS Regression**

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	3297.651	*	528.529	6.24	0.000
Age-squared	-33.742	*	6.375	-5.29	0.000
Incorporated Business	11812.800		11704.150	1.01	0.313
Bachelor's Degree (a)	14728.390	*	3051.949	4.83	0.000
Advanced Degree	21675.290	*	7949.544	2.73	0.006
Home Owner	-13151.020	*	3922.837	-3.35	0.001
Home Value	0.128	*	0.025	5.19	0.000
Monthly Mortgage Payment	2.120		4.036	0.53	0.599
Interest and Dividends	0.024	*	0.009	2.71	0.007
Speaks English at Home	3223.633		5330.059	0.60	0.545
Has a Child under the Age of Six	780.833		3968.276	0.20	0.844
Married	3819.009		2300.250	1.66	0.097
Caucasian Female (b)	-11515.940	*	2451.650	-4.70	0.000
African American	-11721.980	*	2117.499	-5.54	0.000
Asian American	2162.683		7557.896	0.29	0.775
Hispanic American	2196.978		8613.620	0.26	0.799
Native American	-336.090		5445.227	-0.06	0.951
Other Minority	-17626.410	*	4153.551	-4.24	0.000
Year 2011 (c)	-4735.743		2921.441	-1.62	0.105
Year 2012	5376.494		4321.298	1.24	0.214
Year 2013	3587.644		3203.083	1.12	0.263
Year 2014	180.500		3144.882	0.06	0.954
Constant	-48187.030	*	12350.070	-3.90	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is no degree.

(b) For the ethnicity variables, the baseline variable is Caucasian Male.

(c) For the year variables, the baseline variable is year 2010.

(P>|t|) of less than 0.05 denotes findings of statistical significance.

(\*) denotes a statistically significant variable with 95% confidence.



The OLS regression results for business earnings in the materials and commodities industry indicate the following:<sup>392</sup>

- Older business owners have significantly higher business earnings in the materials and commodities industry. However, as business owners age, they have significantly lower business earnings in the materials and commodities industry.
- Business owners with a bachelor's or advanced degree have significantly higher business earnings in the materials and commodities industry.
- Business owners who own a home have significantly lower business earnings in the materials and commodities industry.
- Business owners who have higher-valued homes have significantly higher business earnings in the materials and commodities industry.
- Business owners who have higher interest and dividend income have significantly higher business earnings in the materials and commodities industry.
- Caucasian female, African American, and other minority<sup>393</sup> business owners have significantly lower business earnings than Caucasian males in the materials and commodities industry.
- Native American business owners have lower business earnings than Caucasian males in the materials and commodities industry, but this finding was not significant.
- Asian American and Hispanic American business owners have higher business earnings than Caucasian males in the materials and commodities industry, but this finding was not significant.

#### ***D. Business Earnings Analysis Summary***

Controlling for race and gender-neutral factors, the Business Earnings Analysis documented statistically significant disparities in business earnings for minorities and Caucasian females compared to similarly situated Caucasian males. Caucasian females have significantly lower business earnings in the construction, engineering and professional services, and materials and commodities industries. African Americans have significantly lower business earnings in the construction, construction-related services, engineering and professional services, and materials and commodities industries. Asian Americans have significantly lower business earnings in the construction-related services industry. Other minorities have significantly lower business earnings



<sup>392</sup> For the Business Earnings Model, the results are presented for the age, education, race, and gender variables only.

<sup>393</sup> Other minority includes individuals who belong to two or more racial groups.

in the construction and materials and commodities industries. Table 10.12 depicts the business earnings regression results by ethnicity, gender, and industry.

**Table 10.12: Statistically Significant Business Earnings Disparities**

<b>Ethnicity/Gender</b>	<b>Construction</b>	<b>Construction-related Services</b>	<b>Engineering and Professional Services</b>	<b>Materials and Commodities</b>
<b>Caucasian Female</b>	<i><b>Disparity</b></i>	<b>No Disparity</b>	<i><b>Disparity</b></i>	<i><b>Disparity</b></i>
<b>African American</b>	<i><b>Disparity</b></i>	<i><b>Disparity</b></i>	<i><b>Disparity</b></i>	<i><b>Disparity</b></i>
<b>Asian American</b>	<b>No Disparity</b>	<i><b>Disparity</b></i>	<b>No Disparity</b>	<b>No Disparity</b>
<b>Hispanic American</b>	<b>No Disparity</b>	<b>No Disparity</b>	<b>No Disparity</b>	<b>No Disparity</b>
<b>Native American</b>	<b>No Disparity</b>	<b>No Disparity</b>	<b>No Disparity</b>	<b>No Disparity</b>
<b>Other Minority<sup>394</sup></b>	<i><b>Disparity</b></i>	<b>No Disparity</b>	<b>No Disparity</b>	<i><b>Disparity</b></i>

## **VII. Conclusion**

Two regression analyses were conducted to determine if there were factors in the private sector that might help explain the current levels of M/WBE availability and any statistical disparities between M/WBE availability and utilization in the public sector that were documented in the Study. The analyses examined the following outcome variables: business ownership and business earnings rates. In the four industries — construction, construction-related services, engineering and professional services, and materials and commodities — the analyses determined the effect of race and gender on the two outcome variables. Both analyses used data from the 2010 to 2014 PUMS for Jefferson County, Kentucky, and both compared business ownership rates and earnings for M/WBEs to those of similarly situated Caucasian males.

The analyses document disparities that could limit the formation and growth of M/WBEs within the construction, construction-related services, engineering and professional services, and materials and commodities industries. In the absence of a race- and gender-neutral explanation for the disparities, the regression findings point to racial and gender discrimination that depressed business ownership and business earnings. It can reasonably be inferred that these private sector conditions are manifested in the current M/WBEs’ experiences and likely contributed to lower levels of willing and able M/WBEs.

It is important to note that there are limitations to using the regression findings to identify disparity between the utilization and availability of businesses. No matter how discriminatory the private sector is, findings concerning the private sector cannot be used as the factual basis for a government-sponsored, race-conscious M/WBE program. Therefore, caution must be exercised in the interpretation and application of the regression findings. Their greatest utility is in the formulation of race-neutral recommendations.



<sup>394</sup> Other minority includes individuals who belong to two or more racial groups.

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# CHAPTER 11: Recommendations

## I. Introduction

In 2016, the Louisville and Jefferson County Metropolitan Sewer District (MSD) commissioned Mason Tillman Associates, Ltd. to conduct a Disparity Study (Study) to determine if the factual predicate exists to support race and gender contracting remedies. The 1989 landmark decision of *City of Richmond v. J. A. Croson Co. (Croson)* requires local governments to demonstrate a strong basis in evidence of ongoing effects of past or present discrimination for the enactment of race-conscious remedies<sup>395</sup>. Evidence of discrimination must be statistically significant to document a compelling interest for a race-based public contracting program.<sup>396</sup> While race-conscious goals are subject to strict scrutiny, which is the highest legal standard, remedies based on gender only require a finding of underutilization. This Study assessed MSD's use of minority and women-owned business enterprises (M/WBEs) on purchase orders issued for construction, construction related services, engineering and professional services, and materials, commodities and services. It documented the utilization of M/WBEs ready, willing, and able to provide the goods and services that MSD and its prime contractors procure in the four industries. The Study examined purchase orders issued to M/WBEs pursuant to MSD's procurement regulations and the Supplier Diversity Contractor Compliance Program (CCP).

In 1985, the MSD Board approved a supplier diversity strategic initiative that established the CCP, which was designed to promote diversity in MSD's procurement. Until 2015, MSD operated the CCP to encourage and facilitate M/WBE participation in its contracts. In 2015, the MSD Board suspended the Program. Until it was amended, the CCP included race and gender goals and program elements to promote supplier diversity. On December 1, 2015, the MSD Board suspended the 1985 CCP and adopted an Interim Supplier Diversity Policy (Policy) without M/WBE goals, pending the findings from the 2016 Disparity Study.

The contracts analyzed in the Study were awarded prior to the promulgation of the Policy. The recommendations presented in this chapter provide enhancements to the Policy. Best management practices are offered to augment the race-neutral components of the Interim Supplier Diversity Policy and others to implement race and gender-conscious remedies to address the statistical findings of disparity documented in the Study.



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<sup>395</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 521 (1989).

<sup>396</sup> *Id.*

## II. Disparity Analysis Findings

The statistical findings of disparity in the award of purchase orders to M/WBEs are summarized in this section and detailed in *Chapter 7: Prime Contract Disparity Analysis* and *Chapter 8: Subcontract Disparity Analysis*. The disparity findings were calculated in compliance with the constitutional parameters set forth in *Croson* and its progeny.<sup>397</sup> The disparity findings for minority groups are reported as “disparity” or “no disparity.” The disparity findings for Caucasian females are reported as “disparity” or “underutilized.”<sup>398</sup> The statistical outcomes of the disparity findings are described in the Table 11.1.

**Table 11.1: Statistical Outcome Definitions**

<b>Statistical Outcome</b>	<b>Definition of Statistical Outcome</b>
Disparity	The underutilization of the minority group is statistically significant. The underutilization of Caucasian females is statistically significant.
No Disparity	The underutilization of the minority group is not statistically significant.
Underutilized	The underutilization of Caucasian females is not statistically significant.



<sup>397</sup> *Croson*, at 488 U.S. 469 (1989).

<sup>398</sup> *Brunet v. City of Columbus*, 1 F.3d 390 (6th Cir. 1993), cert. denied, 510 U.S. 1164, 114 S. Ct. 1190, 127 L. Ed.2d 540 (1994), the Sixth Circuit Court of Appeals applied differing standards of review for “gender conscious” and “gender preference” remedies. The Court of Appeals applied intermediate scrutiny to gender conscious programs and the higher strict scrutiny standard to gender preference remedies.

## **A. Prime Contractor Disparity Findings**

The prime contractor disparity analysis was performed on construction, construction-related services, engineering and professional services, and materials, commodities and services purchase orders awarded during the July 1, 2010, to June 30, 2015, study period. The disparity analysis was conducted at two thresholds—informal and formal. The informal level is defined as purchase orders valued from \$10,001 to \$20,000.<sup>399</sup> The formal level was defined separately for each industry to prevent the dataset from being skewed.

The upper limits of each threshold were capped to remove outliers that distorted the dataset. The formal thresholds for each industry are listed in Table 11.2. The methodology used to determine the outliers that were needed to normalize the dataset is discussed in *Chapter 3: Prime Contractor Utilization Analysis*. The disparity findings for each industry are presented below.

**Table 11.2: Formal Thresholds by Industry**

<b>Industry</b>	<b>Formal Threshold</b>
Construction	\$20,001 to \$1,710,000
Construction-related Services	\$20,001 to \$500,000
Engineering and Professional Services	\$20,001 to \$460,000
Materials, Commodities and Services	\$20,001 to \$350,000

### **1. Construction Prime Contractor Disparity Findings**

Table 11.3 depicts the disparity findings for construction purchase orders valued from \$10,001 to \$20,000. Table 11.4 depicts the disparity findings for construction purchase orders valued from \$20,001 to \$1,710,000.



<sup>399</sup> The informal threshold is consistent with MSD's procurement regulations in force during the study period.

**Table 11.3: Construction Services - \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction</b>
African Americans	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>
Caucasian Females	<i>Disparity</i>

**Table 11.4: Construction Services - \$20,001 to \$1,710,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction</b>
African Americans	<i>Disparity</i>
Asian-Pacific Americans	<i>Disparity</i>
Asian-Indian Americans	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>
Caucasian Females	<i>Underutilized</i>

**2. Construction-related Services Prime Contractor Disparity Findings**

Table 11.5 depicts the disparity findings for construction-related services purchase orders valued from \$10,001 to \$20,000. Table 11.6 depicts the disparity findings for construction-related services purchase orders valued from \$20,001 to \$500,000.

**Table 11.5: Construction-related Services - \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction-related Services</b>
African Americans	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>



**Table 11.6: Construction-related Services - \$20,001 to \$500,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction-related Services</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Disparity</i></b>

**3. Engineering and Professional Services Prime Contractor Disparity Findings**

Table 11.7 depicts the disparity findings for engineering and professional services purchase orders valued from \$10,001 to \$20,000. Table 11.8 depicts the disparity findings for engineering and professional services purchase orders valued from \$20,001 to \$460,000.

**Table 11.7: Engineering and Professional Services - \$10,001 to \$20,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Engineering and Professional Services</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Disparity</i></b>

**Table 11.8: Engineering and Professional Services - \$20,001 to \$460,000,  
July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Engineering and Professional Services</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Asian-Pacific Americans</b>	<b><i>Disparity</i></b>
<b>Hispanic Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Disparity</i></b>



#### 4. Materials, Commodities and Services Prime Contractor Disparity Findings

Table 11.9 depicts the disparity findings for materials, commodities and services purchase orders valued from \$10,001 to \$20,000. Table 11.10 depicts the disparity findings for materials, commodities and services purchase orders valued from \$20,001 to \$350,000.

**Table 11.9: Materials, Commodities and Services - \$10,001 to \$20,000, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Materials, Commodities and Services
African Americans	<i>Disparity</i>
Caucasian Females	<i>Disparity</i>

**Table 11.10: Materials, Commodities and Services - \$20,001 to \$350,000, July 1, 2010, to June 30, 2015**

Ethnicity/Gender	Materials, Commodities and Services
African Americans	<i>Disparity</i>
Caucasian Females	<i>Disparity</i>

#### ***B. Subcontractor Disparity Findings***

As detailed in *Chapter 4: Subcontractor Utilization Analysis*, an extensive effort was undertaken to identify subcontracts awarded by MSD’s construction and engineering and professional services prime contractors. While the M/WBE subcontract records maintained by MSD during the July 1, 2010, to June 30, 2015 study period were comprehensive, the non-M/WBE subcontract records were not. Consequently, the non-MWBE subcontract records had to be reconstructed. The collaborative effort between MSD and Mason Tillman resulted in the reconstruction of non-M/WBE subcontract records for MSD’s construction prime contracts. The effort to reconstruct the engineering and professional services prime contracts was insufficient to perform a disparity analysis. Thus, the subcontract disparity analysis presented below is limited to the construction industry.

##### **1. Construction Subcontract Disparity Findings**

A disparity was found in the award of construction subcontracts to African American and Asian-Indian American-owned businesses. Caucasian females were found to be underutilized.



**Table 11.11 Construction - July 1, 2010, to June 30, 2015**

<b>Ethnicity/Gender</b>	<b>Construction</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Asian-Indian Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Underutilized</i></b>

### ***III. Race and Gender-Conscious Remedies***

The proposed race-conscious recommendations are predicated on the disparity findings and limited to the ethnic groups that were statistically significantly underutilized. The gender-conscious recommendations proposed, which are subject to a lesser legal standard, are predicated on a statistical finding of underutilization. The Interim Supplier Diversity Policy should be amended to include the proposed race and gender-conscious remedies for the procurement of prime contractor and subcontractor purchase orders. For prime contractor purchase orders, the remedies should include bid discounts and evaluation points. For subcontractor purchase orders, the remedies should include construction subcontract goals.

#### ***A. Prime Contractor Remedies***

##### **1. Bid Discounts on Construction Services**

A ten percent bid discount for evaluation purposes on construction prime purchase orders should be implemented. The maximum discount should not exceed \$50,000. When applied, the bid discount would reduce the eligible bidder's price by ten percent for evaluation purposes. The groups with statistically significant underutilization would be eligible for the bid discount, as listed below in Table 11.12.

**Table 11.12: Groups Eligible for Construction Bid Discounts**

<b>Ethnicity/Gender</b>	<b>Construction Purchase Orders</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Hispanic Americans</b>	<b><i>Disparity</i></b>
<b>Asian Pacific Americans</b>	<b><i>Disparity</i></b>
<b>Asian Indian Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Disparity</i></b>



## 2. Bid Discount to Construction-related Services

A ten percent bid discount for evaluation purposes on construction-related prime purchase orders should be implemented. The maximum discount should not exceed \$50,000. When applied, the bid discount would reduce the eligible bidder's price by ten percent for evaluation purposes. The groups with statistically significant underutilization would be eligible for the bid discount, as listed below in Table 11.13.

**Table 11.13: Groups Eligible for Construction-related Bid Discounts**

Ethnicity/Gender	Construction-related Purchase Orders
African Americans	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>
Caucasian Females	<i>Disparity</i>

## 3. Evaluation Incentive Credits for Engineering and Professional Services

The incentive credits should apply when the evaluation is based on qualifications. Ten percent of the total evaluation credits available when scoring proposals and statements of qualifications should be allocated to the ethnic groups with a disparity and underutilized woman-owned businesses. Including incentive credits in the evaluation criteria might counterbalance the competitive disadvantage experienced by the ethnic groups that were statistically significantly underutilized and the underutilized gender groups. The ethnic groups with statistically significant disparity and the underutilized woman-owned businesses that would be eligible for the evaluation points are listed in Table 11.14.

**Table 11.14: Groups Eligible for Engineering and Professional Services Evaluation Points**

Ethnicity/Gender	Engineering Professional Services Purchase Orders
African Americans	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>
Asian Pacific Americans	<i>Disparity</i>
Caucasian Females	<i>Disparity</i>



#### 4. Bid Discount on Materials, Commodities and Services

A ten percent bid discount for groups with statistically significant disparity on materials, commodities and services prime purchase orders should be implemented. The maximum discount should not exceed \$50,000. The bid discount would reduce the bidder's price by ten percent for evaluation purposes. The groups with statistically significant disparity that would be eligible for the bid discount are listed in Table 11.15.

**Table 11.15: Groups Eligible for Materials, Commodities and Services Bid Discounts**

<b>Ethnicity/Gender</b>	<b>Materials, Commodities and Services Purchase Orders</b>
<b>African Americans</b>	<b><i>Disparity</i></b>
<b>Caucasian Females</b>	<b><i>Disparity</i></b>

#### ***B. Subcontractor Remedies***

MSD should implement construction subcontract remedies for the ethnic groups that were found to have statistically significant disparity and the gender groups that were underutilized. Since the non-M/WBE professional service subcontractors could not be reconstructed, the subcontractors utilized on the professional service prime contracts MSD awards during the next 12 months should be examined. Over the next 12 months, MSD should require professional service prime contractors to list all subcontractors, M/WBEs and non-M/WBEs, on their subcontractor utilization plan. Remedies for engineering and professional services subcontracts should be based on the statistical findings.

##### **1. M/WBE Subcontract Goals on Construction Purchase Orders**

A M/WBE subcontractor goal should be set on construction prime purchase orders. An MBE goal should be applicable to the ethnic groups that had a statistically significant disparity. A separate subcontract goal should be set on construction prime contracts for WBEs since Caucasian females were underutilized on MSD's construction subcontracts. To meet the narrowly tailored standard, the M/WBE construction subcontract goal should be based on the availability levels for each eligible ethnic or gender group presented in Table 11.16.



**Table 11.16: M/WBE Construction Subcontractor Availability**

<b>Ethnicity/Gender</b>	<b>Construction</b>
<b>African Americans</b>	18.23%
<b>Asian Indian Americans</b>	1.99%
<b>Caucasian Females</b>	14.81%

**C. Procedures to Implement M/WBE Remedies**

Specific programmatic procedures are needed to effectively implement the recommended prime and subcontractor race and gender-conscious remedies. These procedures include an assessment of the M/WBE certification eligibility standards, verification of compliance at bid opening, good faith effort provisions when the M/WBE goal is not met, and subcontractor substitution and monitoring. MSD’s Interim Supplier Diversity Policy includes a number of the measures needed to support a comprehensive race and gender conscious remedial program. Modifications are proposed for several of the Policy provisions to enhance their effectiveness, in addition to enhancements to maximize the participation of M/WBEs on MSD’s procurements.

**1. M/WBE Certification Requirements**

Certification is important to ensure that the businesses that participate in the race and gender-based remedies are eligible. MSD has a compliance field-monitoring program to ensure M/WBEs are performing a commercially useful function and are utilizing their own employees and equipment. However, MSD does not certify businesses and M/WBE certifications are accepted from several agencies. It is important to ensure that the certification process of the local agencies meets minimum standards regarding the verification of the ethnicity, gender, ownership, and control of the business operations, and the minimum period of the business’ existence (at least one (1) year). Thus, MSD should only consider the M/WBE certification from an entity that performs both desk audits and site visits. Before and after accepting another agency’s M/WBE certification, MSD should reserve the right to conduct site visits and/or an independent audit of the certification application. Recertification of MWBE status should be required annually to verify the business’ eligibility is current.

**2. Goal Attainment at Bid Opening**

The Interim Supplier Diversity Policy requires documentation of goal attainment. The documentation is not required to be submitted to MSD until the day immediately following the bid opening date. To ensure the integrity of the process, the documentation should be submitted with the bid or proposal. The review of goal attainment should include the verification of the listed business’ M/WBE certification status and the prime contractor’s intent to use the business to perform a commercially useful function. If the good faith effort documentation is not submitted



with the bid or the submittal is not approved, MSD should move to the next lowest bidder. The next lowest bidder's documentation should be reviewed until a responsive bidder is identified. If no bidder is found to be responsive, the contract should be cancelled and re-advertised.

### **3. Good Faith Effort Requirements**

Good faith effort criteria are necessary for bidders who fail to meet the M/WBE subcontracting goals. The MSD's Interim Supplier Diversity Policy includes good faith effort criteria. A bidder who fails to meet the M/WBE subcontracting goal is required to submit the required documentation with his/her bid or proposal to demonstrate the efforts to secure M/WBE participation or the bid will be deemed non-responsive. The evaluation is quantified to ensure an objective review.

### **4. Commercially Useful Function Criteria**

The criteria for counting M/WBE participation, which is detailed in the Interim Supplier Diversity Policy, should also include a commercially useful function standard. A business that performs a commercially useful function minimally does the following:

- Executes a distinct element of the work of the contract.
- Carries out its obligation by actually performing, managing, or supervising the work involved and, in the case of a supplier, warehousing its materials, supplies, and equipment.
- Performs work that is normal business practice for its industry, service, and function.
- Completes the work identified at the time of bid opening and does not further subcontract a portion of the work that is greater than that expected to be subcontracted by normal industry standard.
- Received compensation commensurate with the work performed.

### **5. Participation Counted Toward the M/WBE Goal**

Subcontractor participation counted toward the goal should be performed by the listed M/WBE subcontractors unless MSD approves a substitution during the term of the contract. Contractors who do not use the listed M/WBE subcontractor and fail to secure an approved substitution should not receive reimbursement for self-performing or having another contractor perform all or part of the listed M/WBEs work.



## **6. Substitution of Listed M/WBE Subcontractors**

The compliance monitoring and audit functions of MSD's Interim Supplier Diversity Policy should include specific standards for M/WBE subcontractor substitution. Substitution of a M/WBE listed in the prime contractor's bid or proposal should be approved in writing by the project manager. To substitute a M/WBE, there must be due process. Conditions where a substitution should be considered are where the subcontractor:

- Becomes insolvent.
- Fails or refuses to execute a written contract for the scope of work specified in the subcontractor's bid and at the price specified in the subcontractor's bid, after a reasonable amount of time has been granted.
- Fails or refuses to perform his or her subcontract.
- Fails or refuses to meet the agreed upon bond requirements.
- Performs substantially unsatisfactory work that is not in accordance with the plans and specifications, or is substantially delaying or disrupting the progress of the work.

A written request for substitution should be submitted to the project manager and the One Water Procurement Supplier Diversity Director. The subcontractor should be copied on the request. A hearing should be afforded to the subcontractor to present a written or oral statement of the facts. The hearing should be held within five (5) working days. Prior to scheduling a hearing, the One Water Procurement Supplier Diversity Director should attempt to mediate the dispute. The decision reached by the One Water Procurement Supplier Diversity Director should be final and binding.

The parties should be provided five (5) working days to respond to MSD with any objections to the decisions made based on the hearing. Failure to submit written or oral notice of an objection should constitute the parties consent to MSD's decision. If the substitution is granted, the substituted M/WBE should be replaced with another M/WBE and approved by the One Water Procurement Supplier Diversity Director.

## **7. Separate Subcontractor Contract Amount**

The amount equivalent to the value of the M/WBE subcontractor's award should be a separate line item in the prime contractor's agreement. Reimbursements to the prime contractor for subcontract payments should be disbursed from the line item when proof of payment to the subcontractor is provided. The final disbursement of the funds in the subcontractor line item should occur when the subcontractor's work is completed and paid in full by the prime contractor.



## **8. Tracking and Monitoring Standards**

M/WBE utilization should be monitored for compliance with M/WBE goals for the duration of the contract. MSD's Interim Supplier Diversity Policy includes reporting provisions to measure the Program's effectiveness. The monitoring should be expanded to include reporting of all subcontractors and a monthly verification of payments to MWBE subcontractors used to meet the goals. Any substitutions of listed subcontractors should be reported in the monthly report.

A quarterly M/WBE Utilization report should also be produced. The contracts and the prime contractors who did not achieve goal attainment at the close out, as well as the departments that awarded each contract, should be listed in the report.

## **9. M/WBE Quarterly Participation**

MSD should record M/WBE participation on each prime contract awarded. Each prime contractor should be required to complete a subcontractor utilization form listing all subcontractors, suppliers and truckers to be used on the contract. Each invoice should list the cumulative payment to each listed contractor. Any additional businesses added to the contract must be listed on an amended subcontractor participation form. All substitutions and removal of a subcontractor should be approved and reported on an amended subcontractor participation form. A utilization review should be conducted by the department to measure the effectiveness of the Interim Supplier Diversity Policy by analyzing the prime contract and subcontract awards by ethnicity, gender, and industry. The report should be presented to MSD's Board at quarterly intervals and published on MSD's website. The review should also document the attainment of the construction subcontract goals.

Minimally, the report should document 1) year-to-date payments, 2) original award, and 3) modifications to the original award. Prime contract change orders and amendments should be separately reported by department and industry. Contract-specific waivers to the subcontract goal at bid opening, substitutions, or failure to meet the subcontract goal during the term of the contract should also be published in the report.

The fourth-quarter report should also assess year-to-date Policy activities. It should include the Business Advisory Council's comments and MSD's exemplary practices and achievements.

## **10. Prompt Payment Provisions**

The Interim Supplier Diversity Policy requires prime contractors to pay M/WBEs for completed work immediately upon receipt of payment from MSD. The payment must be made before additional payments are made to the prime contractor. MSD requires its prime contractors to certify in writing that payment to its subcontractors has been made. MSD also encourages M/WBEs to negotiate with prime contractors to stipulate in the subcontract that payment for services will be made within thirty (30) days of receipt of an invoice for acceptable work product or service when MSD's payment has not been received. MSD should also promptly submit its payments to prime contractors within the period established by its agreements with prime contractors upon receiving



an undisputed invoice as part of the prompt payment provisions. All prime contractor payments should be posted on MSD's website within 48 hours of issuance of payment.

### **11. Formal Notice of Invoice Disputes**

While MSD has informal means to resolve payment disputes, the resolution process should be formalized. Within five (5) days of receiving a disputed invoice, MSD should provide the contractor with an Invoice Dispute Notification detailing items in dispute. Undisputed invoice amounts should be paid within fifteen (15) days and disputed items should be resolved in a timely manner and thereafter paid promptly.

The prime contractor should have the same obligation to give notice to the subcontractor within five (5) days of any disputed invoice or item of work on an invoice submitted to MSD and pay the subcontractor within five (5) days of receiving payment from MSD. Payments from MSD to the prime contractor should be withheld and the prime contractor should be penalized if the subcontractor is not paid timely.

### **12. Augmented Supplier Diversity Staff**

To effectively support an enhanced Interim Supplier Diversity Policy, adequate staffing is required. The staff should possess the requisite skills, knowledge, and abilities to implement and manage the complex requirements of a comprehensive supplier diversity program. To fulfill the proposed Policy objectives, MSD should augment the staff to include professionals to perform the contract compliance responsibilities, a database analyst to handle the systems requirements, and an ombudsperson to mediate disputes.

### **13. M/WBE Advisory Council**

MSD should establish a M/WBE Advisory Council (Council) to support the administration of the Supplier Diversity Policy. The Council should function as an advocate for M/WBEs and other small businesses and be responsible to facilitate:

- Access to contracting opportunities for M/WBEs and other small businesses.
- Initiatives that promote and advance M/WBE participation as prime and subcontractors.
- Enhancements to the contract opportunity notification process.

Ten members should be appointed by the Executive Director with the consent of the MSD Board. The Executive Director should designate and appoint a Chairman and the Council should elect a Secretary for three-year terms. The membership and Council guidelines should be published on MSD's Supplier Diversity's webpage. Members should serve for staggered terms of three years. The Council should monitor the effectiveness of the Interim Supplier Diversity Policy and make recommendations to the Executive Director and the One Water Procurement Supplier Diversity Director.



#### **14. Supplier Diversity Program Training Manual**

A *Supplier Diversity Program Training Manual* should be developed to standardize the application of the Program across the departments. The manual should describe the Program's updated mission, policy, and procedures and be available electronically to all staff and downloadable from the Supplier Diversity Program's webpage. The requirements set forth in the manual should become standard operating procedure for each department. The *Training Manual* would also provide staff with clear guidance on their responsibilities to track and report the participation of MWBEs. The components of the Program that are integral to the procurement process should also be incorporated in the procurement training and manual.

#### **15. Systemwide Supplier Diversity Training**

Training for all MSD staff should be conducted quarterly. Whenever the Policy is updated, a refresher training should be provided to all staff. The training module should be included in the new employee orientation packet. The training should minimally include a 1) seminar to inform staff of any changes to the Interim Supplier Diversity Policy and procedures and to promote the enhancements and 2) employee training to ensure that new employees understand the established policies and procedures. A printed copy of the Interim Supplier Diversity Policy should be provided to each new MSD employee.

#### **16. Enhance M/WBE Outreach and Marketing Strategies**

While MSD offers pre-bid meetings, there are several outreach and marketing strategies that may improve M/WBE participation on both prime contracts and subcontracts. Efforts to meet the M/WBE subcontract goal could be enhanced with a comprehensive outreach campaign to communicate contracting opportunities, contracting procedures, and the goals and objectives of the Interim Supplier Diversity Policy. Table 11.17 lists strategies and tactics that MSD should employ to market the Interim Supplier Diversity Policy.



**Table 11.17: Outreach and Marketing Strategies**

Strategy	Tactics
Design tagline and produce banner display	<ul style="list-style-type: none"> <li>• Develop tagline</li> <li>• Design banner with placement of existing logo and new tagline</li> </ul>
Define design standards and a layout for a uniform appearance of procurement documents	<ul style="list-style-type: none"> <li>• Revise all procurement materials to include the program logo and tagline to have a uniform appearance</li> </ul>
Develop collateral print material for outreach campaign	<ul style="list-style-type: none"> <li>• Produce digital brochure to reflect program changes</li> <li>• Develop articles and press kits</li> </ul>
Launch outreach campaign	<ul style="list-style-type: none"> <li>• Distribute press kits and press releases</li> <li>• Place public service announcements</li> <li>• Pitch campaign to broadcast media</li> </ul>
Host semi-annual contractors' open house and other networking events	<ul style="list-style-type: none"> <li>• Plan and coordinate open house events</li> <li>• Distribute invitations by mail, facsimile, email, and tweets</li> <li>• Include procurement department in outreach events</li> <li>• Publicize informal contract opportunities</li> <li>• Distribute contract forecasts and certification forms</li> </ul>
Distribute forecasts to targeted businesses	<ul style="list-style-type: none"> <li>• Post forecasts on the website</li> <li>• Distribute through facsimile, email, Facebook™, Twitter™, and text alerts</li> </ul>
Partner with agencies and organizations to disseminate program information	<ul style="list-style-type: none"> <li>• Continue current agency partnerships</li> <li>• Develop local business and trade associations group partnerships</li> </ul>
Conduct an annual program impact and outcome evaluation	<ul style="list-style-type: none"> <li>• Establish measurable outcomes</li> <li>• Conduct business satisfaction surveys</li> <li>• Examine bidding history by department</li> </ul>



## 17. Expand the M/WBE Technical Assistance Initiatives

Enhancing the M/WBEs administrative and technical infrastructure can be beneficial for MSD. A successful technical assistance program can increase the number of M/WBEs available and increase the capacity of the M/WBEs that submit bids to MSD. There are multiple free and subsidized programs available in the market area. The following best management practices are offered to build the capacity of M/WBEs and other small businesses:

- **Mentor/Protégé Program** – Entrepreneur training, with mentor and protégé working together to enhance the protégé’s firm’s marketing, operations, and financial performance. The mentor would be a construction management professional with whom MSD would contract to provide direct training services to the protégé. The protégé would be a new or small M/WBE construction business. To participate in the program, the protégé would have to commit to a 24-month training session. Each training cycle would have 10 to 12 protégés.
- **Jefferson Community and Technical College** – Several low-cost courses and development programs for small businesses to develop their technical skills, including business internships, finance planning, and business management.
- **Federal government technical assistance services** – Through the US Small Business Administration’s (SBA) SCORE Program, Small Business Development Centers, and Women Business Centers:
  - *SCORE Program* - Provides free mentorship and workshops for small businesses, including 1) volunteer mentors for small business owners, 2) free, confidential business mentoring in person, by email, or by video, 3) free online business tools and tips, and 4) low cost or free workshops and webinars. The SBA has SCORE business mentors located within Louisville. The mentors provide small business owners with access to business financing and entrepreneurial development.
  - *SBA, Kentucky District Office Business Development Program* - The Kentucky District Office is responsible for the delivery of SBA’s programs and services throughout Kentucky. It provides small business loan and assistance programs and special outreach efforts and initiatives to aid and inform small businesses.
  - *The Louisville Small Business Development Center (SBDC)* - Provides free counseling to existing and potential business owners within Louisville. SBDC also offers low cost training programs taught by industry experts and qualified SBDC consultants.<sup>400</sup>
- **Women’s Business Center in Lexington, KY** - Provides counseling and resources to build the capacity of women business owners.
- **Think Kentucky; Cabinet for Economic Development** - The Cabinet offers mentoring and business assistance services to business owners throughout Kentucky.



<sup>400</sup> <https://www.ksbdc.org/louisville>

## **18. Provide Financial Assistance to M/WBEs**

MSD should leverage its banking relationships to provide financial services to mitigate the adverse impact M/WBEs experience from their limited access to capital. There is an array of services that can be offered to MWBEs without cost or nominal cost to MSD. Financial services that could be offered through financial institutions with which MSD has a business relation include:

- Commitments to provide offer letters of financial capability with contingent financing commitments so M/WBEs can demonstrate that they possess the financial solvency to execute contract awards.
- Start-up loan programs for M/WBEs to increase access to capital and put larger projects within reach of small businesses. The loans could be used to cover payroll costs, equipment purchases, working capital, and mobilization costs.
- Lines of credit and capital improvement financing with interest rates, loan terms, and collateral requirements that are more favorable than that available in the commercial market.
- Linked deposit program that leverages MSD's deposits with financial institutions to create a low-interest loan program. M/WBEs could use their MSD contracts or subcontracts as collateral for a loan with lower interest rates and modified underwriting criteria.

## **19. Penalties for Non-Compliance**

MSD's Interim Supplier Diversity Policy provides for temporary suspension and debarment for violation of the M/WBE contract provisions. Procedures for determining violations need to be established to specify procedures for reporting a violation, responsible party for adjudicating the reported violation, and the due process to investigate and render a final decision.

## ***IV. Race and Gender-Neutral Recommendations***

MSD is committed to promoting the financial growth and stability of local small businesses within its market area.

### ***A. Implement a Small Local Business Enterprise Program***

The Interim Supplier Diversity Policy should be expanded to include a Small Local Business Enterprise (SLBE) Program. The SLBE Program will improve access to MSD contracts for small businesses within the market area.



## 1. SLBE Eligibility Requirements

### a. Business Residency Requirements

An eligible small business should be headquartered, physically located, and licensed to operate in Jefferson County. The firm should be in operation for a minimum of one year prior to applying for a SLBE certification.

### b. Business Size Standards

MSD should define eligibility by the business gross revenue averaged over three years. According to referenceUSA®, the leading provider in business and consumer research, 48 percent of the businesses in the United States have annual revenue of less than \$500,000. The Commonwealth of Kentucky's percentages of businesses with annual revenue under \$500,000 is similar to that of the United States at 50 percent. Table 11.18 illustrates the business revenue within the various jurisdictions. It is recommended that the SLBE size threshold be set at \$500,000, with average annual revenues over a three-year period of \$500,000 or less.

**Table 11.18: Business Profile by Annual Revenue**

Annual Revenue	United States	Commonwealth of Kentucky	Jefferson County	City of Louisville
Less than \$500,000	5,808,549	76,686	14,108	13,615
\$500,000-\$999,999	2,914,076	33,877	8,967	8,716
\$1,000,000-2,500,000	1,827,092	22,701	5,299	5,132
\$2,500,001-\$4,999,999	730,949	9,024	2,167	2,114
\$5,000,000-\$10,000,000	411,525	4,729	1,209	1,177
More than \$10,000,000	404,477	5,253	1,340	1,308
<b>TOTAL</b>	<b>12,096,668</b>	<b>152,270</b>	<b>33,090</b>	<b>32,062</b>

Source: referenceUSA®

### c. SLBE Certification

Applicants should be required to submit documentation demonstrating the business size, and the owner's active participation in the control, operation, and management of the business. M/WBE certified firms that document their business size meet the eligibility standard and can be an SLBE. SLBEs should be required to re-certify every two years.



#### **d. SLBE Goal**

MSD should establish a 15 percent SLBE goal on construction, construction-related, engineering and professional services, and materials, commodities and services contracts to increase the participation of minority, women, and other small businesses.

#### **2. Establish Procedures to Unbundle Contracts for SLBEs to Perform**

MSD should institute procedures to ensure that a reasonable number of competitively procured prime contracts are of a size that SLBEs can likely perform. The larger construction and professional services projects should be reviewed to identify items of work that can be unbundled into contracts that small businesses can perform as prime contractors. Amendments and change orders should be reviewed for prime contract opportunities with SLBEs. Notice of the intent to amend the contract for a new service should be posted on MSD's web site and notification sent to certified LSBEs and M/WBEs that offer the service.

#### **3. Implement a Small Purchase Sheltered Market Program**

A small purchases rotation component should be established for construction, construction-related services, engineering and professional services, and materials, commodities and services prime contracts that do not exceed \$20,000. Small purchases are solicited without advertising.

The small purchases rotation component should limit competition to certified SLBEs. The awards would be made on a rotating basis. No business in the rotation should be eligible to receive a second assignment until all other businesses on the list have been offered at least one assignment.

#### **4. SLBE Directory**

MSD should maintain an SLBE directory that is updated quarterly. The directory should list the firm's name, address, phone and fax numbers, email address, website address, and the type of work typically performed by the SLBE.

#### **5. SLBE Advisory Committee**

The M/WBE Business Advisory Council should include a designee for the SLBE program. The designee should have voting authority on all matters regarding the SLBE program.

#### **6. Penalties for Non-Compliance**

The MSD's Interim Supplier Diversity Policy provides for temporary suspension and debarment for violation of the M/WBE contract provisions. Procedures for determining violations of the SLBE policy need to be established and include how to report a violation, who will adjudicate the reported violation, and the due process to investigate and make findings.



## **B. Establish a Community Benefits Program**

MSD should consider establishing a Community Benefits Program (CBP) whereby engineering, construction and other firms awarded contracts by MSD provide financial contributions, volunteer hours, and/or in-kind services to non-profit organizations in the local community committed to workforce and economic development.

The community benefits program should encourage MSD contractors to make commitments to support community programs and activities that address some of the conditions that adversely impact contracting opportunities, and the supply of workers for mission critical jobs that relate to MSD's core services.

Providing community benefits is a deliverable, zero-dollar task. The contractor should solely fund the community benefits commitments and no such funding should be tied to or dependent upon MSD funds or sources of funding received from MSD.

The following list provides examples of community benefits programs and initiatives:

- *Workforce Development* – In order to prepare for the skills gap predicted in the near future, a workforce study should be undertaken to create the factual predicate required to establish hiring goals for residents, apprentices, trade persons, and professional workers. The workforce goals should be placed on the construction and professional services projects funded by MSD's Integrated Overflow Abatement Plan (IOAP) and Critical Repair and Reinvestment Plan.
  - MSD should partner with organizations that prepare pre-apprentices and sponsor apprenticeship programs to provide relevant job training and recruitment services to fill the positions created by the construction projects and to provide exposure to careers in civil and environmental engineering, architecture, environmental planning, construction management, and others. The partnerships should focus on the training and development of minority and female workers in the construction trades and professional positions used in the sewer system industry. The Office of Career and Technical Education and the Kentucky Labor Cabinet offer pre-apprenticeship opportunities to high school students through secondary technical centers in Jefferson County and across the state. Pre-apprentice and apprentice programs are particularly important points of entry into sewer-related jobs because they can create a pool of female and minority workers located in the areas impacted by MSD's sewer rehabilitation programs.
  - All contracts and labor agreements for construction, professional services, and supplies funded by the IOAP and the Critical Repair and Reinvestment Plan should include the benefits initiative to create careers in the construction and wastewater industries that are supported by living wages and benefits.
- *Economic Development* - MSD should be committed to economic development strategies resulting in public-private-community partnerships, which promote contracting

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opportunities with local, small businesses that hire local workers from the neighborhood impacted by the project. Successful contractor proposals should ensure that the businesses and workers that make up the local communities where MSD operates and provides services receive economic benefits from the project.

#### Examples

1. Offer trainings and courses to small, local businesses and nonprofits.
  2. Support programs and organizations that develop small, local businesses and nonprofits in business management.
  3. Train small, local businesses on specific scopes of work related to the projects (e.g. estimating, project scheduling, accounting/cash flow management, and communications/graphics).
  4. Offer mentorship to small, local businesses and nonprofits to develop their business plans and diversify their funding sources.
  5. Support nonprofit community-based-organizations that provide business training and technical assistance to small, local businesses wanting to compete for and participate on contracting opportunities with MSD.
- *Education* - MSD should be focused on ensuring that students are building the foundation to become ecoliterate citizens, and ultimately the guardians and stewards of MSD storm water and sewer systems. Successful contractor proposals should ensure investments that may include activities and initiatives that support science and engineering curriculums, involve partnerships with local educational nonprofits and schools, and that take into consideration the priorities of the school district.

#### Examples

1. Programs that support the advancement of engineering and science education in disadvantaged communities impacted by MSD, e.g. funding the development of ecoliteracy curricula and training for K-12 students located in local public schools.
  2. Programs that “adopt a local school” and provide support and resources in the neighborhoods impacted by MSD.
  3. Programs that bring the Contractor’s professional staff into the community to effectively engage and promote a culture of science, technology, engineering, mathematics, and civic engagement, such as serving as mentors to students, tutoring, or making presentations in classrooms.
  4. Support for scholarship awards to college or to learning experiences for youth.
  5. Provide professional design and energy efficiency services to public school districts to support their sustainability efforts, especially in disadvantaged schools.
- *Environmental Justice* - MSD should adopt a policy promoting environmental justice. Environmental justice is defined as the fair treatment of people of all races, cultures, and incomes such that no group of people bear a disproportionate share of negative



environmental consequences resulting from the operations, programs, and/or policies of MSD. MSD should seek to prevent, mitigate, and lessen the disproportionate environmental impacts of its activities on communities in all our service areas. Successful contractor proposals should address environmental justice concerns, improve health outcomes in the community, and support the continued presence of long-term residents and businesses in the community.

## Examples

### *Land Use*

1. Support innovative land use programs and urban agriculture initiatives (such as community gardens, urban farms, greenhouses) that educate students and residents about sustainability practices, such as rainwater harvesting or use of native, low-water use plants.

### *Neighborhood Stabilization*

2. Support for organizations that work on the acquiring real estate to promote community stabilization.
3. Technical assistance and support for organizations that construct and/or renovate community housing, community retail, or other identified public assets.
4. Technical assistance for mold prevention, remediation, or energy efficiency upgrades.
5. Support for nonprofits that provide financial assistance and coaching to low-income homes, nonprofits, and small businesses.

The CBP should be sustained with a program budget and staffing plan to ensure the initiatives are implemented and monitored to fully achieve the stated objectives. There should be metrics to evaluate the implementation of the CBP components. The evaluation results should be compiled and published quarterly.

The CBP should be supported by a community advisory group appointed by MSD's Executive Director. The community advisory group should have authority to make recommendations regarding the effectiveness of the CBP and to offer modifications to the implementation strategies to enhance the fulfillment of the program objectives.



## **V. Procurement Administrative Recommendations**

Procurement administrative recommendations are offered to expand the responsibility of the Interim Supplier Diversity Policy to more effectively address the barriers that market area M/WBEs and other small businesses encounter while trying to do business with MSD.

### **A. Pre-Award Recommendations**

#### **1. Implement an Owner-controlled Insurance Program**

MSD should implement an Owner Controlled Insurance Program (OCIP) to consolidate risk management costs and reduce the burden of the insurance premium for MWBEs and small business owners. Under an OCIP or “wrap-up” program, a single insurance program provides insurance for the owner and all eligible (on-site) project contractors and subcontractors. An OCIP could be established in cooperation with other local governmental agencies. MSD, and any other participating governmental agencies, would benefit as well, since the vendor passes the fee for the surety bond to MSD in its pricing. The OCIP could be used to allow coverages for multiple insured entities to be “wrapped up” into a single consolidated insurance program.

#### **2. Expanded Solicitation Notification Criteria**

MSD currently publishes solicitations on its website and in the *Courier Journal* at least seven days before the bid opening. Print media is increasingly being replaced by digital media. Publishing bidding opportunities in newspapers and trade publications can be ineffective in reaching M/WBEs since searching for bidding opportunities in print media is time-consuming and tedious. Given the changes in communication styles to target outreach and maximize reach in a cost-effective way, MSD should use email, Twitter™, and text alerts as a standard method of communication to reach more M/WBEs and non-M/WBEs.

#### **3. Listserv™ to Communicate with Certified Businesses**

Listserv™, an email list management software, could target emails to certified M/WBEs that have expressed an interest in MSD’s upcoming contracts and contract forecasts. A Listserv™ can disseminate low-cost communications to M/WBEs, ensuring that communications occur on a regular basis. The database can be easily updated to include newly-certified M/WBEs.

#### **4. Uniform Procurement Regulations**

MSD’s procurement regulations should be updated to incorporate the proposed race and gender-conscious and neutral recommendations affecting the solicitation, evaluation, and award of MSD contracts.



## **5. Modify Procurement Procedures for Multiple Contract Awards**

MSD's procurement procedures for multiple contract awards should be revised. Multiple purchase orders are issued on a single invitation to bid or through a competitive negotiation. Before dissemination of the solicitation, the Executive Director must confirm that the procurement is in the best interest of MSD and reasonable cost will be incurred. Using this method, multiple construction and professional services contracts are awarded to a single vendor, which can limit contracting opportunities for M/WBEs. MSD should limit the number of multiple contracts through a single bid or competitive negotiation to a maximum of two awards.

### **B. Post-Award Procedures**

#### **1. Provide Debriefing Sessions for Unsuccessful Bidders**

Debriefing sessions should be made available to unsuccessful bidders. This option should be published on MSD's website and included in the Notice of Intent to Award that is emailed to unsuccessful bidders.

#### **2. Pay Mobilization to Subcontractors**

Under circumstances in which mobilization payments are approved for the prime contractor, the subcontractor should be paid an amount equal to their participation percentage no later than five (5) business days before they are required to mobilize to perform the contracted work. To ensure transparency, subcontractors should be notified when prime contractors receive mobilization payments from MSD. Notification should be provided through facsimile or email. The prime contractor should be required to submit proof of mobilization payment to subcontractors. The information should also be posted on MSD's website. For subcontractors, project start-up costs can also be significant. A subcontractor who has limited resources and access to credit may find that start-up expenses inhibit its ability to bid on MSD contracts.

#### **3. Modify Change Order Requirements**

MSD requires documentation describing the justification for change orders on commodities, construction, supplies, and equipment purchase orders. Changes to scope or pricing for professional services purchase orders must be negotiated by the Procurement Team and Board approval may be necessary. Additionally, the following requirements should be met for authorization of change orders:

- The request should not exceed 15 percent of the original cost of the contract; if the cost exceeds 15 percent the contract, the new task or scope should be awarded through competitive solicitation.
- The change order should only be granted for the same scope or work described in the original contract.
- The history of previous change order requests to the contract should accompany all additional requests.



## **VI. Data Management Enhancements**

### **1. Modify the Financial Management System**

The prime contractor data analyzed in the Study was provided by the Finance Division and the Engineering Division. The datasets were extracted from MSD's Systems, Applications and Products (SAP) database. Critical information was missing from the prime contract dataset maintained by the Finance Division. Mason Tillman recommends several modifications to track comprehensive M/WBE and non-M/WBE prime contractor and subcontractor data:

- Implement a cloud-based contract compliance reporting system to track the participation of all subcontractors, subconsultants, suppliers, and truckers for the duration of each contract.
- Modify the Subcontractor Payment Verification Program to include complete contact information for each subcontractor and require that subcontractor payments be provided for the subcontracts used on the first four tiers.
- Centralize the financial management system.

Requiring prime contractors to submit verification of the listed subcontractors' intent to perform should be a condition of a responsive bid or proposal. MSD's approval of an M/WBE substitutions should be required to be submitted with the prime contractor's invoice.

An electronic compliance reporting portal should be accessible through MSD's website to allow for submission of utilization reports and online verification of payments made to both prime contractors and subcontractors. The compliance reporting system should be fully integrated with MSD's financial management database to ensure that information submitted by a contractor is captured and verified.

The Subcontractor Payment Verification Program should support MSD's prompt payment policy and enhance MSD's ability to monitor compliance with the Supplier Diversity Policy. MSD could use its own electronic tracking system or purchase a proprietary tracking system. An online system would notify MSD of late payments or non-payments in real time without involving the subcontractor. In addition, each subcontractor listed as 'paid' for the previous billing cycle should be contacted electronically to verify receipt of payment.

Instituting a subcontractor payment verification procedure would eliminate reliance on self-reporting by prime contractors. It would also relieve the subcontractor of the responsibility to report its prime contractor for failure to pay invoices timely. With real-time reporting, a late payment from the prime contractor or a discrepancy in the amount received from the prime contractor could be resolved before MSD makes any additional payments to the prime contractor.

MSD's financial management system should be integrated into a subcontractor tracking and monitoring system. At minimum, each record in this centralized system should include the unique contract number, the contract name, project description, industry code, award amount and date, modification amounts and dates, payment amounts and dates, vendor name, and certification



status. This system should track contracting activity from award through project close-out and include payments and payment dates for all subcontractors, truckers, and suppliers up to the fourth-tier subcontractors.





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