



Metropolitan Transit Authority of
Harris County, Texas

DISPARITY STUDY

FINAL REPORT

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ASSOCIATES, LTD

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CHAPTER 1: Legal Review

I. Introduction

The Disparity Study (Study) is an analysis of data that measures the availability of Disadvantaged Business Enterprises (DBEs), and their utilization in contracts awarded by the Metropolitan Transit Authority of Harris County, (referred to as the Authority). The analysis complies with the federal case law and Title 49 Code of Federal Regulations, Subtitle A, Part 26.

Two United States Supreme Court decisions, *City of Richmond v. J.A. Croson Co. (Croson)*¹ and *Adarand v. Peña (Adarand)*², raised the standard by which federal courts review both the USDOT DBE programs and local government minority business enterprise programs. This chapter presents the state of the federal law applicable to public contracting affirmative action programs following the *Croson* and *Adarand* decisions.³

The United States Supreme Court's (Court) 1989 *Croson* decision set forth the evidentiary standard of review applicable to race-conscious public contracting programs. *Croson*, also established the standard of review for non-federally funded race-conscious programs. The Court decided that programs employing racial classification would be subject to "strict scrutiny," the highest legal standard. Broad notions of equity or general allegations of historical and societal discrimination against minorities fail to meet the requirements of strict scrutiny. As set forth in *Croson*, local governments may only adopt race-conscious programs as a remedy for identified statistical findings of discrimination, and the remedy must impose a minimal burden upon unprotected classes.

Adarand, which the Court decided in 1995, directly challenged the USDOT's DBE program as set forth in the regulations. While the Court found a compelling interest for the DBE program it ruled that it must be narrowly tailored to comply with the *Croson* strict scrutiny standard. In response to *Adarand*, the USDOT amended the DBE regulations in 1999 to include a race-neutral component to the DBE goal.

Following *Adarand*, the Seventh, Eighth, Ninth and Tenth Circuits have all considered facial challenges to the constitutionality of the DBE regulations. The circuit courts have all found the federal Disadvantaged Business Enterprise (DBE) Program to be constitutional on its face.



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

² *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200, 200 (1995).

³ *In Houston Contractors Association v. Metropolitan Transit Authority of Harris County*, 993 F. Supp 545, the District Court for the Southern District of Texas found the Metro DBE unconstitutional and entered an injunction prohibiting the collection of race, sex religion, or national origin data from its contractors, subcontractors and suppliers until a project was completed and prohibiting the use of race, race and ethnicity in the contracting process.

II. *Standard of Review*

The standard of review is a measure by which the court evaluates whether a legal claim meets the law, a certain statute, rule, or precedent. The relevant standard of review determines the level of scrutiny a court applies during its analysis of whether a law is constitutional. This section discusses the relevant standard of review applied to remedial contracting programs based on race or gender. This section also includes a discussion of both the heightened standard of review that the Court set forth in *Croson* for race-conscious programs, and the standard of review for small, local, and woman-owned business enterprise programs.

A. *Minority Business Enterprise Programs*

The Court in *Croson* affirmed that, pursuant to the Fourteenth Amendment's Equal Protection Clause, the proper standard of review for race-conscious contracting programs is strict scrutiny.⁴ The Court recognized that a state or local entity may take action, in the form of a Minority Business Enterprise (MBE) program, to rectify the effects of *identified, systemic racial discrimination* within its jurisdiction.⁵ However, under the strict scrutiny analysis, the government must show that the race-conscious measures in an MBE program are *narrowly tailored* to achieve a *compelling state interest*.⁶ In practice, strict scrutiny requires that a government entity prove both a compelling interest in remedying identified discrimination in contracting based upon strong evidence, and that the measures adopted to remedy the discrimination are narrowly tailored to that evidence. In *Croson*, the plaintiff was a construction firm and sole bidder that was denied a contract because they failed to meet the 30% 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 30% MBE subcontracting goal was imposed with no geographic limitation on the available pool of MBEs and did not provide a waiver provision 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% 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 which 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 was neither sufficiently particularized, nor germane to the City's local contracting market, and therefore was 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's disparity analysis was calculated based on the number of prime contracts awarded to MBEs as compared to the City's MBE population.

⁴ *Croson*, 488 U.S. at 493-95.

⁵ *Id.* at 509.

⁶ *Id.*



According to the Court, the proper calculation should have been the percentage of MBE's in the relevant market area that were qualified, willing and able to work on the City's contracts as compared to the percentage of total City construction dollars that were awarded to MBEs.

Furthermore, the Court held that the City failed to demonstrate that the MBE Plan was *narrowly tailored* to remedy the effects of prior discrimination because it failed to establish discrimination within the City's local contracting market, and it entitled MBEs located anywhere in the country to an absolute preference based solely on their race. The Court also determined that the 30% goal was not based on the availability of MBEs in the City's local contracting market, but rather predicated upon 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 address the identified discrimination.

Justice O'Connor, speaking for the majority, articulated methods of demonstrating discrimination to survive the strict scrutiny test and set forth guidelines for crafting MBE programs that are *narrowly tailored* to address systemic racial discrimination.⁷ The Court held that the government must show that it had become either an *active* or a *passive participant* in a system of racial exclusion to survive strict scrutiny.⁸ Methods available to demonstrate patterns of discrimination that appropriately 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. The Court approved methods to construct a strong evidentiary framework are discussed in greater detail in *Section IV: Croson Evidentiary Framework*.

The Fifth Circuit Court of Appeals in *W.H. Scott* considered the guidance *Croson* provided to justify the enactment of remedial measures in considering a challenge to the City of Jackson's MBE contracting program.⁹ The appellate court noted that in considering an equal protection challenge to a minority contracting program, the courts have looked to disparity indices or to computations of disparity percentages to provide the probative evidence of discrimination. The Fifth Circuit Court opined that the disparity study must not be limited to only an analysis of prime contracting but must include an analysis of the availability and utilization of minority subcontractors. The subcontracts were deemed a relevant component of the City's pool of construction projects.¹⁰

⁷ *Id.* 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 United States Supreme Court in *Croson* and subsequent cases provides 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.

⁸ *Id.* at 492-93.

⁹ *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206 (5th Cir. 1999).

¹⁰ 199 F. 3d at 218.



B. Women Business Enterprise Programs

Women Business Enterprise (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 contracting programs, the Court has remained silent with respect to the appropriate standard of review for geographically based WBE 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, the federal courts standard of review for gender classifications is *intermediate* scrutiny, regardless of which gender is favored.

The Fourth Circuit in *H.B. Rowe Co. v. Tippet* stated that the defender of a gender classification statute must demonstrate that the classification “serves important governmental objectives and that the discriminatory means are substantially related to the achievement of those objectives.” In applying this standard, the appellate court held that the public sector classifications based on gender require an *exceedingly persuasive justification*.¹¹ 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.¹²

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.¹³ 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.¹⁴ The courts have also described the test as requiring an *exceedingly persuasive justification* for classifications based on gender.¹⁵ 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.”¹⁶ Circuit courts vary in the application of Court precedent as it relates to gender-based programs.

¹¹ *H.B. Rowe Co., v. Tippet*, 615 F.3d 233, 255, (4th Cir. 2010).

¹² *Schlesinger v. Ballard*, 419 U.S. 498, 508 (1975).

¹³ See *Coral Constr. Co. v. King Cty.*, 941 F.2d 910, 930-31 (9th Cir. 1991); *Engineering Constrs. Ass’n v. Metropolitan Dade Cty. (Dade County II)*, 122 F.3d 895, 907-08 (11th Cir. 1997); see also *Concrete Works of Colo. v. City & Cty. of Denver (Concrete Works IV)* 321 F.3d 950, 960 (10th Cir. 2003); and *H.B. Rowe Co. v. Tippet (Rowe)*, 615 F.3d 233, 236 (4th Cir. 2010). But see *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (gender based affirmative action is subject to strict scrutiny).

¹⁴ *Mississippi Univ. for Women v. Hogan*, 458 U.S. 718, 726 (1982); see also *United States v. Virginia*, 518 U.S. 515, 524 (1996).

¹⁵ *Hogan*, 458 U.S. at 751; see also *Michigan Rd. Builders Ass’n v. Milliken*, 834 F.2d 583, 595 (6th Cir. 1987).

¹⁶ *Id.* at 728; see also *Ballard*, 419 U.S. at 508.



Consistent with the Court’s finding with regard to gender classification, the United States Court of Appeals for the Third Circuit (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.¹⁷ 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*.¹⁸ 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.¹⁹

The United States Court of Appeals for the Sixth Circuit (Sixth Circuit) applies both the strict scrutiny standard and the intermediate standard of review to WBE programs depending on the application of the program’s policies. In *Brunet v. City of Columbus (Brunet)*, 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.²⁰ 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.²¹ 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 the policies are applied equally to both men and women.²² The court classifies a program as “gender-preference” if its policies contain gender-based criteria that are applied directly as a preference.²³

The United States Court of Appeals for the Eleventh Circuit (Eleventh Circuit) also applied intermediate scrutiny.²⁴ In its review and affirmation of the district court’s holding, in *Engineering Contractors Association of South Florida v. Metropolitan 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.”²⁵ Although the *Dade County II* appellate court ultimately applied the intermediate scrutiny standard, it queried whether the

¹⁷ *Contrs. Ass’n of E. Pennsylvania v. City of Philadelphia (Philadelphia IV)*, 6 F. 3d 990, 1001 (3rd Cir. 1993).

¹⁸ *Philadelphia IV*, 6 F.3d at 1009-10.

¹⁹ *Id.* at 1002.

²⁰ *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993).

²¹ *Brunet*, 1 F.3d at 404.

²² *Id.* (citing *Jacobsen v. Cincinnati Bd. of Educ.*, 961 F.2d 100, 102 (6th Cir. 1992)).

²³ *Id.*

²⁴ *Ensley Branch, N.A.A.C.P. v. Seibels*, 31 F. 3d 1548, 1579-80 (11th Cir. 1994).

²⁵ *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.”)).



United States Supreme Court decision in *United States v. Virginia (Virginia)*,²⁶ finding the all-male program at Virginia Military Institute unconstitutional, signaled a heightened level of scrutiny.²⁷ In the case of *Virginia*, the court held that parties who seek to defend gender-based government action must demonstrate an *exceedingly persuasive justification* for that action.²⁸ 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.”²⁹

In *Dade County II*, the Eleventh Circuit court noted that the United States Court of Appeals for the Third Circuit in *Philadelphia IV* was the only federal appellate court that explicitly attempted to clarify the evidentiary requirement applicable to WBE programs.³⁰ *Dade County II* interpreted that standard to mean that “evidence offered in support of a gender preference must not only be ‘probative’ [but] must also be ‘sufficient.’”³¹

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;³² 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”³³ but instead ensuring that the affirmative action is “a product of analysis rather than a stereotyped reaction based on habit.”³⁴

This determination requires “evidence of past discrimination in the economic sphere at which the affirmative action program is directed.”³⁵ 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.”³⁶

²⁶ *Virginia*, 518 U.S. at 534.

²⁷ *Dade County II*, 122 F.3d at 907-08.

²⁸ *Virginia*, 518 U.S. at 534.

²⁹ *Dade County II*, 122 F.3d at 908.

³⁰ *Id.* at 909.

³¹ *Id.* at 910.

³² *Id.* (quoting *Ensley Branch*, 31 F.3d at 1580).

³³ *Id.* (quoting *Hayes v. N. State Law Enf’t Officers Ass’n*, 10 F.3d 207, 217 (4th Cir. 1993) (racial discrimination case)).

³⁴ *Id.* (quoting *Philadelphia IV*, 6 F.3d at 1010).

³⁵ *Id.* (quoting *Ensley Branch*, 31 F.3d at 1581).

³⁶ *Id.* at 929; cf. *Builders Ass’n of Greater Chicago v. Cty. 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).



III. Burden of Proof

The W. H. Scott Court in applying the procedural protocol established by *Croson* requires the governmental entity to demonstrate that there is a compelling interest for the MBE plan and that the plan be narrowly tailored to serve that interest.³⁷ The appellate court noted that the initial burden of proof is upon the government to identify that discrimination with particularity and demonstrate that the challenged MBE program is supported by a strong factual predicate – documented statistically significant evidence of past discrimination.³⁸ 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:³⁹

- Disparity exists due to race-neutral reasons
- Methodology is flawed
- Data is statistically insignificant
- Conflicting data exists

Thus, a disparity study must be analytically rigorous, to the extent that the data permits if it is to withstand legal challenge.⁴⁰

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.⁴¹ Whether the government has produced a strong basis in evidence is a question of law.⁴² The defendant in a constitutional claim against a disparity study has the initial burden of proof to show that there was past discrimination.⁴³

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.”⁴⁴ Because the sufficiency of the factual predicate supporting the

³⁷ 199 F. 3d at 217.

³⁸ *Id.*

³⁹ These were the issues on which the district court in Philadelphia reviewed the disparity study before it.

⁴⁰ *Croson*, 488 U.S. at 469.

⁴¹ See *Id.* at 510; *Contractors Ass’n v. City of Philadelphia (Philadelphia VI)*, 91 F.3d 586, 597 (3rd Cir. 1996) (citing *Concrete Works of Colo. v. City & Cty. of Denver (Concrete Works II)*, 36 F.3d 1513, 1522 (10th Cir. 1994).

⁴² *Id.* (citing *Associated Gen. Contrs. v. New Haven*, 791 F.Supp. 941, 944 (D. Conn. 1992)).

⁴³ *Concrete Works II*, 36 F.3d at 1521-22 (citing *Wygant v. Jackson Bd. of Educ.*, 476 U.S. 267, 292 (1986)).

⁴⁴ *Dade County II*, 122 F.3d at 916.



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.⁴⁵

The adequacy of the government’s evidence is “evaluated in the context of the breadth of the remedial program advanced by the [jurisdiction].”⁴⁶ The onus is upon 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.⁴⁷ 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.⁴⁸ The ultimate burden of proof is therefore upon the plaintiff.

B. Ultimate Burden of Proof

The party challenging an MBE program will bear the ultimate burden of proof throughout the course of the litigation—despite the government’s obligation to produce a strong factual predicate to support its program.⁴⁹ The plaintiff must persuade the court that the program is constitutionally flawed 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.”⁵⁰

The Seventh Circuit Court of Appeals in *Midwest Fence* addressed the plaintiff’s burden when it rejected the plaintiff’s expert witnesses critique because “he did not perform any substantive analysis of his own.”⁵¹ The Seventh Circuit noted that conjecture and speculative terms like “unclear” or “may not be true in practice” or “if the estimates of capacity are too low” fail to satisfy the plaintiff’s burden to provide evidence to undermine the government’s evidence for remedial measures.⁵²

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)*.⁵³ She stated that following the production of the factual predicate supporting the program:

⁴⁵ *Concrete Works II*, 36 F.3d at 1522.

⁴⁶ *Id.* (citing *Croson*, 488 U.S. at 498).

⁴⁷ *See Croson*, 488 U.S. at 488.

⁴⁸ *Engineering Contrs Ass’n v. Metropolitan Dade Cty. (Dade County I)*, 943 F. Supp. 1546, 1558-61 (S.D. Fla. 1996).

⁴⁹ *Id.* at 1557 (citing *Wygant*, 476 U.S. at 277-278).

⁵⁰ *Concrete Works IV*, 321 F.3d 950, 989 (10th Cir. 2003).

⁵¹ 840 F.3d at 952.

⁵² *Id.*

⁵³ *Wygant*, 476 U.S. at 293.



[I]t is incumbent upon the non-minority [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*.⁵⁴

In *Philadelphia IV*, the Third Circuit clarified this allocation of the burden of proof and the constitutional issue of whether facts constitute a *strong basis in evidence*.⁵⁵ The court wrote that the allocation of the burden of persuasion depends on the theory of constitutional invalidity that is being considered.⁵⁶ 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.⁵⁷

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.⁵⁸

In *Concrete Works II*, the United States Court of Appeals for the Tenth Circuit (Tenth Circuit) clearly stated that as 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 (Slater)*: “[g]eneral criticism of disparity studies, as opposed to particular evidence undermining the reliability of the particular disparity study, is of little persuasive value.”⁵⁹

The Court's disposition of the plaintiff's petition for *certiorari* strongly supports the conclusion that plaintiff has the burden of proof. Court review of appellate decisions is discretionary in that four justices must agree, so normally little can be inferred from its denial. However, *Concrete Works* is not the typical instance. Justice Scalia concurred in *Croson* that strict scrutiny was required of race-conscious contracting programs. Justice Scalia's view was that governmental remedies should be limited to provable individual victims. That view was at the base of his written dissent, which only Chief Justice Rehnquist joined, to the Court's November 17, 2003, decision not to grant *certiorari* in *Concrete Works*.⁶⁰

⁵⁴ *Id.*

⁵⁵ *Philadelphia IV*, 6 F.3d 990, *on remand*, 893 F.Supp. 419 (E.D. Penn. 1995), *aff'd*, 91 F.3d 586 (3rd Cir. 1996).

⁵⁶ *Id.* at 597.

⁵⁷ *Id.*

⁵⁸ 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 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.

⁵⁹ *Concrete Works IV*, 321 F.3d at 979 (quoting *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1174 (10th Cir. 2000)).

⁶⁰ *Id.* at 950, *petition for cert. denied*, (U.S. Nov. 17, 2003) (No. 02-1673).



The Tenth Circuit and the Eleventh Circuit present alternative approaches to the legal evidentiary requirements of the shifting burden of 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 persisting vestiges of discrimination exist.⁶¹

The Tenth Circuit’s opinion in *Concrete Works IV* states that the burden of proof remains with the plaintiff to demonstrate that an ordinance is unconstitutional.⁶² On the other hand, the Eleventh Circuit in *Hershell Gill Consulting Engineers, Inc. v. Miami-Dade County (Hershell)* contends 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.⁶³ Therefore, the proponent of the classification must meet a substantial burden of proof, a standard largely allocated to the government to prove 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 the 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 (Dade County I)*, the same Eleventh Circuit case that was cited to in the Tenth Circuit.⁶⁴ 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.⁶⁵

IV. Croson Evidentiary Framework

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

⁶¹ *Hershell Gill Consulting Engineers, Inc. v. Miami-Dade Cty.*, 333 F. Supp. 2d 1305, 1325 (S.D. Fla. 2004).

⁶² *Concrete Works IV*, 321 F.3d at 959 (2003) (quoting *Slater*, 228 F.3d at 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.”)).

⁶³ *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. Bd. of Regents of the U. of Georgia*, 263 F.3d 1234, 1244 (11th Cir. 2001)).

⁶⁴ *Dade County I*, 943 F. Supp. at 1557.

⁶⁵ *Id.* at 1559-60.



A. Active or Passive Participation

Croson requires that the local entity seeking to adopt an MBE program must have perpetuated the discrimination to be remedied by the program.⁶⁶ A governmental entity can enact race conscious measures to remedy past or present discrimination where it has actively discriminated in the award of public contracts or is a “passive participant” in a system of discriminatory conduct by the local construction industry.⁶⁷

An entity will be considered an *active* participant if the evidence shows that it has created barriers that actively exclude MBEs from its contracting opportunities. The governmental entity is not required, however, to definitively prove discrimination in order to establish a strong basis in evidence to justify race conscious measures.⁶⁸ In addition to examining the government’s contracting record and process, other types of evidence that may be considered include anecdotal evidence from MBEs who have contracted or attempted to contract with that entity. Businesses can be interviewed to convey their experiences in pursuing that entity’s contracting opportunities.⁶⁹

An entity will be considered to be a *passive* participant in private-sector discriminatory practices if it has infused tax dollars into that discriminatory practice.⁷⁰ Passive participation will satisfy the Court’s strict scrutiny review.⁷¹ The *Croson* Court emphasized a government’s ability to passively participate in private-sector discrimination with monetary involvement, stating:

[I]t is beyond dispute that any public entity, state or federal, has a *compelling interest* in assuring that public dollars, drawn from tax contributions of all citizens, do not serve to finance the evil of private prejudice.⁷²

Until *Concrete Works II*, the inquiry regarding passive discrimination was limited to the subcontracting practices of government prime contractors. In *Concrete Works II*, the Tenth Circuit considered a purely private-sector definition of passive discrimination. Since no government funds were involved in the contracts analyzed in the case, the court questioned whether purely private-sector discrimination was likely to be a fruitful line of inquiry.⁷³ On remand the district court

⁶⁶ *Croson*, 488 U.S. at 488.

⁶⁷ *W. H. Scott*, 199 F.3d at 217.

⁶⁸ *Midwest Fence*, 840 F. 3d at 945 (citing *H. B Rowe Co v. Tippet*, 615 F.3d 233, 241 (4th Cir. 2010).

⁶⁹ *Wygant*, 476 U.S. at 275.

⁷⁰ *Croson*, 488 U.S. at 492; *Coral Constr.*, 941 F.2d at 916.

⁷¹ *Id.* at 492, 509.

⁷² *Id.*

⁷³ *Concrete Works II*, 36 F.3d at 1529 (citing *Croson*, 488 U.S. at 492) (“What the Denver MSA data does not indicate, however, is whether there is any linkage between Denver’s award of public contracts and the Denver MSA evidence of industry-wide discrimination. That is, we cannot tell whether Denver 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 or whether the private discrimination was practiced by firms who did not receive any public contracts. Neither *Croson* nor its progeny clearly state whether private discrimination that is in no way funded with public tax dollars can, by itself, provide the requisite strong basis in evidence necessary to justify a municipality’s affirmative action program. A plurality in *Croson* simply suggested that remedial measures could be justified upon a municipality’s showing that ‘it had essentially become “a passive participant” in a system of racial exclusion practiced by elements of the local construction industry’. Although we do not read



rejected the three disparity studies offered to support the continuation of Denver's M/WBE program, because each focused on purely private-sector discrimination. Indeed, Denver's focus on purely private-sector discrimination may account for what seemed to be a shift by the court away from the standard *Croson* queries of: 1) whether there was a firm basis in the entity's contracting process to conclude that discrimination existed; 2) whether race-neutral remedies would resolve what was found; and 3) whether any race-conscious remedies had to be *narrowly tailored*. The court noted that in the City of Denver's disparity studies, the chosen methodologies failed to address the following six questions:

- Was there pervasive discrimination throughout the Denver Metropolitan Statistical Area (MSA)?
- Were all designated groups equally affected?
- Was discrimination intentional?
- Would Denver's use of such firms constitute *passive participation*?
- Would the proposed remedy change industry practices?
- Was the burden of compliance—which was on white male prime contractors in an intensely competitive, low profit margin business—a fair one?

The court concluded that the City of Denver had not documented a firm basis of identified discrimination derived from the statistics submitted.⁷⁴

However, the Tenth Circuit on appeal of that decision completely rejected the district court's analysis. The district court's queries 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, relying on *Shaw v. Hunt (Shaw)*,⁷⁵ a post-*Croson* Court decision, wrote as follows:

The *Shaw* Court did not adopt any requirement that only discrimination by the governmental entity, either directly or by utilizing firms engaged in discrimination on projects funded by the entity, was remediable. 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." *Id.* at 910, 116 S.Ct. 1894 (quotation omitted). The City can satisfy this condition by identifying the discrimination "*public or private*, with some specificity." *Id.* (quoting *Croson*, 488 U.S. at 504, 109 S.Ct. 706) (emphasis added). The governmental entity must also have a "*strong basis in evidence* to conclude that remedial action was necessary." *Id.*⁷⁶

Croson as requiring the municipality to identify an exact linkage between its award of public contracts and private discrimination, such evidence would at least enhance the municipality's factual predicate for a race- and gender-conscious program. The record before us does not explain the Denver government's role in contributing to the underutilization of MBEs and WBEs in the private construction market in the Denver MSA, and this may well be a fruitful issue to explore at trial").

⁷⁴ *Id.* at 1531.

⁷⁵ *Shaw v. Hunt*, 517 U.S. 899, 909 (1996).

⁷⁶ *Concrete Works IV*, 321 F.3d at 975-76.



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.”⁷⁷ 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.”⁷⁸ While the Tenth Circuit noted that the record contained “extensive evidence” of private sector discrimination, the question of the adequacy of private sector discrimination as the factual predicate for a race-based remedy was not before the court.⁷⁹

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 (Builders Association)*.⁸⁰ The plaintiff in *Builders Association* 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.⁸¹ The challenged program consisted of a 16.9% MBE subcontracting goal, a 10% MBE prime contracting goal, a 4.5% WBE subcontracting goal and a 1% WBE prime contracting goal.⁸²

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.⁸³ 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.”⁸⁴ The City was ordered to suspend its M/WBE goals program.

As recently as 2010, the United States Court of Appeals for the Fourth Circuit (Fourth Circuit) in *H.B. Rowe Co. v. Tippet (Rowe)* 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.⁸⁵ The court found that the private sector data did not test whether the underutilization was statistically significant or just mere chance.⁸⁶

⁷⁷ *Id.* at 976 (quoting *Shaw*, 517 U.S. 909).

⁷⁸ *Id.*

⁷⁹ *Id.* at 959, 977, 990.

⁸⁰ *Builders Ass’n of Greater Chicago v. City of Chicago*, 298 F. Supp. 2d 725, 732 (N.D. Ill. 2003).

⁸¹ *Builders Ass’n*, 298 F. Supp. 2d at 726, 729, 733-34.

⁸² *Id.* at 729.

⁸³ *Id.* at 735-37.

⁸⁴ *Id.* at 737-39, 74.

⁸⁵ *Rowe*, 615 F.3d at 236.

⁸⁶ *Id.* at 255.



B. Systemic Discriminatory Exclusion

Croson clearly established that an entity enacting a business affirmative action program must demonstrate identified, systemic discriminatory exclusion on the basis of race or any other illegitimate criteria (arguably gender).⁸⁷ Thus, it is essential to demonstrate a pattern and practice of such discriminatory exclusion in the relevant market area.⁸⁸ Using appropriate evidence of the entity's active or passive participation in the discrimination, as discussed above, the showing of discriminatory exclusion must cover each racial group to whom a remedy would apply.⁸⁹ Mere statistics and broad assertions of purely societal discrimination will not suffice to support a race- or gender-conscious program.

Croson enumerates several ways an entity may establish the requisite factual predicate. 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.⁹⁰ When the relevant statistical pool is used, a showing of gross statistical disparity alone "may constitute *prima facie* proof of a pattern or practice of discrimination."⁹¹

The *Croson* Court made clear that both prime contract and subcontracting data was relevant. 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."⁹² Subcontracting data is also an important means by which to assess suggested future remedial actions. Since the decision makers vary for the awarding of prime contracts and

⁸⁷ *Croson*, 488 U.S. at 469. See also *Monterey Mechanical v. Pete Wilson*, 125 F.3d 702, 711 (9th Cir. 1997) (The Fifth Circuit Court in *W.H. Scott Construction Co. v. City of Jackson, Miss.*, 199 F.3d 206, 219 (5th Cir. 1999) found that 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 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). "Had the City adopted particularized findings of discrimination within its various agencies and set participation goals for each accordingly, our outcome today might be different. Absent such evidence in the City's construction industry, however, the City lacks the factual predicates required under the Equal Protection Clause to support the Department's 15% DBE-participation goal.

In 1996, Houston Metro had adopted a study done for the City of Houston whose statistics were limited to aggregate figures that showed income disparity between groups, without making any connection between those statistics and the City's contracting policies. The disadvantages cited that M/WBEs faced in contracting with the City also applied to small businesses. Under *Croson*, that would have pointed to race-neutral remedies. The additional data on which Houston Metro relied was even less availing. Its own expert contended that the ratio of lawsuits involving private discrimination to total lawsuits and ratio of unskilled black wages to unskilled white wages established that the correlation between low rates of black self-employment was due to discrimination. Even assuming that nexus, there is nothing in *Croson* that accepts a low number of MBE business formation as a basis for a race-conscious remedy).

⁸⁸ *Id.* at 509.

⁸⁹ *Id.* at 506. As the Court said 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 *North Shore Concrete and Assoc. v. City of New York*, 1998 U.S. Dist. LEXIS 6785 (EDNY 1998), which rejected the inclusion of Native Americans and Alaskan Natives in the City's program, citing *Croson*.

⁹⁰ *Id.* at 5.

⁹¹ *Id.* at 501 (citing *Hazelwood Sch. Dist. v. United States*, 433 U.S. 299, 307-08 (1977)).

⁹² *Id.* at 502-03.



subcontracts, the remedies for discrimination identified at a prime contractor versus subcontractor level might also vary.

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.”⁹³ Thus, if an entity has statistical evidence that non-minority contractors are systematically excluding minority businesses from subcontracting opportunities, it may act to end the discriminatory exclusion.⁹⁴ Once an inference of discriminatory exclusion arises, the entity may act to dismantle the closed business system.

In *Coral Construction v. King County (Coral Construction)*, the Ninth Circuit further elaborated upon the type of evidence needed to establish the factual predicate that justifies a race-conscious remedy. The court held that both statistical and anecdotal evidence should be relied upon in establishing systemic discriminatory exclusion in the relevant marketplace as the factual predicate for an MBE program.⁹⁵ 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.⁹⁶

Likewise, anecdotal evidence, standing alone, is unlikely to establish a systemic pattern of discrimination.⁹⁷ Nonetheless, anecdotal evidence is important because the individuals who testify about their personal experiences bring “the cold numbers convincingly to life.”⁹⁸

1. Geographic Market

Croson did not speak directly to how the geographic market is to be determined. In *Coral Construction*, the Court of Appeals held that “an MBE program must limit its geographical scope to the boundaries of the enacting jurisdiction.”⁹⁹ Conversely, in *Concrete Works I* the Tenth Circuit specifically approved the Denver Metropolitan Statistical Area as the appropriate market area since 80% of the construction contracts were awarded there.¹⁰⁰

Read together, these cases support a definition of market area that is reasonable rather than dictated by a specific formula. *Croson* and its progeny did not provide a bright line rule for local market area, which determination should be fact-based. An entity may limit consideration of evidence of

⁹³ *Id.* at 509.

⁹⁴ *Id.*

⁹⁵ *Coral Constr.* 941 F.2d at 919.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* (quoting *International Brotherhood of Teamsters v. United States (Teamsters)*, 431 U.S. 324, 339 (1977)).

⁹⁹ *Id.* at 925.

¹⁰⁰ *Concrete Works of Colorado v. City and Cty. of Denver (Concrete Works I)*, 823 F.Supp. 821, 835-36 (D.Colo. 1993); *rev’d on other grounds*, 36 F.3d 1513 (10th Cir. 1994); 86 F. Supp. 2d 1042 (D. Colo. 2000).



discrimination within its own jurisdiction.¹⁰¹ Extra-jurisdictional evidence may be permitted when it is reasonably related to where the jurisdiction contracts.¹⁰²

2. Current Versus Historical Evidence

In assessing the existence of identified discrimination through demonstration of a disparity between MBE utilization and availability it may be important to examine disparity data both prior to and after the entity's current MBE program was enacted. This will be referred to as *pre-program* versus *post-program* data.

On the one hand *Croson* requires that an MBE program be *narrowly tailored* to remedy current evidence of discrimination.¹⁰³ 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 a long history of an entity's utilization to assess current evidence of discrimination. In fact, *Croson* indicates that it may be legally fatal to justify an MBE program based upon outdated evidence.¹⁰⁴ Therefore, the most recent two or three years of an entity's utilization data would suffice to determine whether a statistical disparity exists between current M/WBE utilization and availability.¹⁰⁵

Pre-program data regarding an entity's utilization of MBEs prior to enacting the MBE program may be relevant to assess the need for the agency to keep such a program intact. A 1992, unpublished opinion by Judge Henderson of the United States District Court for the Northern District of California, *RGW Construction v. San Francisco Bay Area Rapid Transit District (BART)*,¹⁰⁶ set forth the possible significance of statistical data during an entity's *pre-program* years. Judge Henderson opined that statistics that provide data for a period when no race- and gender-based DBE goals were operative is often the most relevant data in evaluating the need for remedial action by an entity. Indeed, "to the extent that the most recent data reflect the impact of operative DBE goals, then such data are not necessarily a reliable basis for concluding that remedial action is no longer warranted."¹⁰⁷ Judge Henderson noted that this is particularly so given

¹⁰¹ *Cone Corp. v. Hillsborough Cty.*, 908 F.2d 908, 914 (11th Cir. 1990); *Associated Gen. Contrs v. Coalition for Economic Equity (AGCC II)*, 950 F.2d 1401 (9th Cir. 1991).

¹⁰² 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.

¹⁰³ See *Croson*, 488 U.S. at 509-10.

¹⁰⁴ See *Id.* at 499 (stating that "[i]t is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination").

¹⁰⁵ See *AGCC II*, 950 F.2d at 1401. (Consultant study looked at City's MBE utilization over a one-year period.)

¹⁰⁶ See November 25, 1992, Order by Judge Thelton Henderson (on file with Mason Tillman Associates). San Francisco Reporter, Judge Approves BART Plan on Minority Contracts Chronicle, Dec. 4, 1992, at A25.

¹⁰⁷ *Id.*



the fact that DBEs report that they are seldom or never used by a majority prime contractor without DBE goals. This situation may be the case suggests a possibly fruitful line of inquiry: an examination of whether different programmatic approaches in the same market area led to different outcomes in DBE participation. The Tenth Circuit came to the same conclusion in *Concrete Works II*. It is permissible for a study to examine programs where there were no goals.

Similarly, the Eleventh Circuit in *Dade County II* cautions that using post-enactment evidence (post-program data) may mask discrimination that might otherwise be occurring in the relevant market. Still, the court agreed with the district court that it was not enough to speculate on what MBE utilization would have been in the absence of the program.¹⁰⁸

Thus, an entity should look both at pre-program and post-program data in assessing whether discrimination exists currently and analyze whether it would exist in the absence of an M/WBE program.

3. Statistical Evidence

To determine whether statistical evidence is adequate to give rise to an inference of discrimination, courts have looked to the *disparity index*, which consists of the percentage of minority or women-owned contractor participation in local contracts divided by the percentage of minority or women contractor availability or composition in the population of available firms in the local market area.¹⁰⁹ Disparity indexes have been found highly probative evidence of discrimination where they ensure that the *relevant statistical pool* of minority or women contractors are being considered. Statistical evidence demonstrating 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 MBEs that an entity utilizes in a given product/service category and the number of available MBEs in the relevant market area specializing in the specified product/service category would give rise to an inference of discriminatory exclusion.

Second, M/WBE dollar participation can be compared to M/WBE availability. This comparison could show a disparity between the award of contracts by an entity in the relevant locality/market area to available majority contractors and the award of contracts to M/WBEs. Thus, in *Associated Gen. Contractors v. Coalition for Economic Equity (AGCC II)* an independent consultant's study compared the number of available MBE prime contractors in the construction industry in San

¹⁰⁸ *Dade County II*, 122 F.3d at 912.

¹⁰⁹ 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.



Francisco with the amount of contract dollars awarded to San Francisco-based MBEs over a one-year period. The study found that available MBEs received far fewer construction contract dollars in proportion to available non-minority counterparts.¹¹⁰

Whether a disparity index supports an inference that there is discrimination in the market turns not only on what is being compared, but also on whether any disparity is statistically significant. 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."¹¹¹

Following the dictates of *Croson*, courts may carefully examine whether there is data that shows that MBEs are ready, willing, and able to perform.¹¹² Recently, the Ninth Circuit in *Associated General Contractors of California, San Diego Chapter v. Caltrans* (*Caltrans*) deviated from the *Croson* standard, which determined the factual predicate needed to support an inference of discrimination in the relevant market area.¹¹³ *Croson* held that a disparity index of 100 represents statistical parity between availability and utilization, and a number below 100 indicates underutilization. However, in 2013 *Caltrans* applied a lesser standard, substantial disparity, and ruled that an index at or below 80 is sufficient factual predicate to support an inference of discrimination in the relevant market area. Thus, the substantial disparity standard allows public agencies in the Ninth Circuit to implement race and gender-conscious remedies without a finding of statistically significant disparity as set forth in *Croson*.

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."¹¹⁴ Anecdotal evidence should be gathered to determine if minority contractors are systemically 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 the M/WBE community, which are accessible to all segments of the business community regardless of race. They are not intrusive and in fact require no evidence of discrimination before implementation. Conversely, race-conscious measures, such as set-asides, fall at the other end of the spectrum and require a larger amount of evidence.¹¹⁵

¹¹⁰ *AGCC II*, 950 F.2d at 1414. Specifically, the study found that MBE availability was 49.5 % for prime construction, but MBE dollar participation was only 11.1 %; that MBE availability was 36 % prime equipment and supplies, but MBE dollar participation was 17 %; and that MBE availability for prime general services was 49 %, but dollar participation was 6.2%.

¹¹¹ *Croson*, 488 U.S. at 501 (quoting *Hazelwood*, 433 U.S. at 307-308).

¹¹² The *Philadelphia* study was vulnerable on this issue.

¹¹³ *Caltrans*, 713 F.3d at 1200.

¹¹⁴ *Croson*, 488 U.S. at 509 (citing *Teamsters*, 431 U.S. at 338).

¹¹⁵ 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.]").



Anecdotal evidence will not suffice standing alone to establish the requisite predicate for a race-conscious program. Its anecdotal value lies in pointing to remedies that are *narrowly tailored*, the second prong of a *Croson* study.

The following types of anecdotal evidence have been presented and relied upon by 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 IV*¹¹⁶
- Prime contractors showing MBE bids to non-minority subcontractors to find a non-minority firm to underbid the MBEs—*Cone Corporation*¹¹⁷
- M/WBEs’ inability to obtain contracts for private-sector work—*Coral Construction*¹¹⁸
- M/WBEs told that they were not qualified, although they were later found to be qualified when evaluated by outside parties—*AGCC II*¹¹⁹
- Attempts to circumvent M/WBE project goals—*Concrete Works II*¹²⁰
- Harassment of M/WBEs by an entity’s personnel to discourage them from bidding on an entity’s contracts—*AGCC II*¹²¹

Courts must assess the extent to which relief measures disrupt settled *rights and expectations* when determining the appropriate corrective measures.¹²² Presumably, courts would look more favorably upon anecdotal evidence, which supports a less intrusive program than a more intrusive one. For example, if anecdotal accounts related experiences of discrimination in obtaining bonds, they may be sufficient evidence to support a bonding program that assists M/WBEs. However, these accounts would not be evidence of a statistical availability that would justify a racially limited program such as a set-aside.

As noted above, in *Croson*, the Court found that the City of Richmond’s MBE program was unconstitutional because the City lacked proof that race-conscious remedies were justified. 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.”¹²³

¹¹⁶ *Philadelphia IV*, 6 F.3d at 1002.

¹¹⁷ *Cone Corp.* 908 F.2d at 916.

¹¹⁸ 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 Construction*, 941 F.2d 910 at 933 (WBE’s affidavit indicated that less than 7% of the firm’s business came from private contracts and that most of its business resulted from gender-based set-asides).

¹¹⁹ *AGCC II*, 950 F.2d at 1415.

¹²⁰ *Concrete Works II*, 36 F.3d at 1530.

¹²¹ *AGCC II*, 950 F.2d at 1415.

¹²² *Wygant*, 476 U.S. at 283.

¹²³ *Croson*, 488 U.S. at 509 (citing *Teamsters*, 431 U.S. at 338).



In part, it was the absence of such evidence that proved lethal to the program. The 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.”¹²⁴

This was not the situation confronting the Ninth Circuit in *Coral Construction*. There, the 700-plus page appellate records contained the affidavits of “at least 57 minorities or women contractors, each of whom complain in varying degrees 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.”¹²⁵ Nonetheless, this anecdotal evidence standing alone was insufficient to justify King County’s MBE program since “[n]otably absent from the record, however, is *any* statistical data in support of the County’s MBE program.”¹²⁶ After noting the Court’s reliance on statistical data in Title VII employment discrimination cases and cautioning that statistical data must be carefully used, the Court elaborated on its mistrust of pure 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.¹²⁷

The Court concluded its discourse on the potency of anecdotal evidence in the absence of a statistical showing of disparity by observing that “rarely, if ever, can such evidence show a systemic pattern of discrimination necessary for the adoption of an affirmative action plan.”¹²⁸

Two other circuit courts also suggested that anecdotal evidence might be dispositive, while rejecting it in the specific case 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*.¹²⁹ The circuit court 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.¹³⁰ Yet, the court stated:

¹²⁴ *Id.* at 480.

¹²⁵ *Coral Constr.*, 941 F.2d at 917-18.

¹²⁶ *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).

¹²⁷ *Id.* at 919.

¹²⁸ *Id.*

¹²⁹ *Philadelphia IV*, 6 F.3d at 1002.

¹³⁰ *Id.* at 1003.



[g]iven *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.¹³¹

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 (O'Donnell)*.¹³² The court found that in the face of conflicting statistical evidence, the anecdotal evidence there 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. The more specific testimony about discrimination by white firms could not in itself support an industry-wide remedy [quoting *Coral*]. Anecdotal evidence is most useful as a supplement to strong statistical evidence—which the Council did not produce in this case.¹³³

The Eleventh Circuit is also 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."¹³⁴ However, it held that this was not the *exceptional case* where, unreinforced by statistics, the anecdotal evidence was enough.¹³⁵ In *Concrete Works I*, the Tenth Circuit described the type of anecdotal evidence that is most compelling: evidence within a statistical context. In approving of the anecdotal evidence marshaled by the City of Denver in the proceedings below, 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.¹³⁶

The court noted that the City had provided such systemic evidence. The Ninth Circuit has articulated what it deems to be permissible anecdotal evidence in *AGCC II*.¹³⁷ There, the court

¹³¹ *Id.*

¹³² *O'Donnell Constr. v. District of Columbia*, 963 F.2d 420, 427 (D.C. Cir.1992).

¹³³ *O'Donnell*, 963 F.2d at 427.

¹³⁴ *Dade County II*, 122 F.3d at 9.

¹³⁵ *Id.* at 926.

¹³⁶ *Concrete Works II*, 36 F.3d at 1530.

¹³⁷ *AGCC II*, 950 F.2d at 1401.



approved a “vast number of individual accounts of discrimination” which included numerous reports of MBEs that were denied contracts despite being the low bidder; MBEs were told that they were not qualified although they were later found to be qualified when evaluated by outside parties; MBEs were refused work even after they were awarded the contracts as low bidder; and MBEs were harassed by City personnel to discourage them from bidding on City contracts. On appeal, the City points to numerous individual accounts of discrimination to substantiate its findings that discrimination exists in the City’s procurement processes; an *old boy’s network* still exists; and racial discrimination is still prevalent within the San Francisco construction industry.¹³⁸ Based on *AGCC II*, it would appear that the Ninth Circuit’s standard for acceptable anecdotal evidence is more lenient than other circuits that have considered the issue.

Taken together, these statements constitute a taxonomy of appropriate anecdotal evidence. The cases suggest that to be optimally persuasive, anecdotal evidence must satisfy six particular requirements.¹³⁹ These requirements are that the accounts:

- Are gathered from minority contractors, preferably those that are *qualified*¹⁴⁰
- Concern specific, verifiable instances of discrimination¹⁴¹
- Involve the actions of governmental officials¹⁴²
- Involve events within the relevant jurisdiction’s market area¹⁴³
- Discuss the harm that the improper conduct has inflicted on the businesses in question¹⁴⁴
- Collectively reveal that discriminatory exclusion and impaired contracting opportunities are systemic rather than isolated or sporadic¹⁴⁵

Given that neither *Croson* nor its progeny identifies the circumstances under which anecdotal evidence alone will carry the day, it is not surprising that none of these cases explicate bright line rules specifying the quantity of anecdotal evidence needed to support a race-conscious remedy. However, the foregoing cases and others provide some guidance by implication.

Philadelphia IV makes clear that 14 anecdotal accounts will not suffice.¹⁴⁶ While the matter is not free of countervailing considerations, 57 accounts, many of which appeared to be of the type referenced above, were insufficient to justify the program in *Coral Construction*. The number of

¹³⁸ *Id.* at 1415.

¹³⁹ *Philadelphia IV*, 6 F.3d at 1003. The anecdotal evidence must be “dominant or pervasive.”

¹⁴⁰ *Philadelphia VI*, 91 F.3d at 603.

¹⁴¹ *Coral Construction*, 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.”

¹⁴² *Croson*, 488 U.S. at 509.

¹⁴³ *Coral Construction*, 941 F.2d at 925.

¹⁴⁴ *O’Donnell*, 963 F.2d at 427.

¹⁴⁵ *Coral Construction*, 941 F.2d at 919.

¹⁴⁶ *Philadelphia IV*, 6 F.3d. at 1002-03.



anecdotal accounts relied upon by the district court in approving Denver's M/WBE program in *Concrete Works I* is unclear, but by one count the number might have exceeded 139.¹⁴⁷ It is, of course, a matter of speculation as to how many of these accounts were indispensable to the court's approval of the Denver M/WBE program.

In addition, as noted above, the quantum of anecdotal evidence that a court would likely find acceptable may depend on the remedy in question. 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 likely extending to verification.

D. Remedial Statutory Scheme

In 2010, *Rowe* challenged the constitutionality of the North Carolina General Assembly's Statute 136-28.4 (Statute), promulgated in 1983.¹⁴⁸ The Statute set forth a general policy to promote the use of small, minority, physically handicapped, and women contractors in non-federally funded State construction projects. The 1983 Statute directed North Carolina Department of Transportation (NCDOT) to encourage and promote the policy. Seven years later in 1990, the Statute was amended to include specific participation goals on state-funded transportation construction contracts for minority and women-owned businesses.

As a result of the amendment, NCDOT created a Minority Business Enterprise and Women Business Enterprise Program for non-federally funded highway and bridge construction contracts. The program mirrored the federal DBE Program pursuant to 49 CFR Part 26. In 1991, the Statute was challenged in District court regarding its constitutionality. The District court ruled in favor of the plaintiff, stating that in order to implement race-conscious measures to remedy discrimination, the governmental entity must identify with "some specificity" the racial discrimination it seeks to remedy. As a result of the District court decision, NCDOT suspended its M/WBE Program in 1991.

In 1993, NCDOT commissioned a disparity study on state-funded transportation construction contracts. The study determined that minority and women subcontractors were underutilized at a statistically significant level, and the M/WBE Program was re-implemented. In 1998, the North Carolina General Assembly (Assembly) commissioned an update to the 1993 study. The 1998 update study concluded that minority and women-owned businesses continued to be underutilized in State-funded road construction contracts.

¹⁴⁷ The Denver City Council enacted its M/WBE ordinance in 1990. The program was based on the results of public hearings held in 1983 and 1988 at which numerous people testified (approximately 21 people and at least 49 people, respectively), and on a disparity study performed in 1990. See *Concrete Works I*, 823 F.Supp. at 833-34. The disparity study consultant examined all of this preexisting data, presumably including the anecdotal accounts from the 1983 and 1988 public hearings, as well as the results of its own 69 interviews, in preparing its recommendations. *Id.* at 833-34. Thus, short of analyzing the record in the case, it is not possible to determine a minimum number of accounts because it is not possible to ascertain the number of consultant interviews and anecdotal accounts that are recycled statements or statements from the same people. Assuming no overlap in accounts, however, and also assuming that the disparity study relied on prior interviews in addition to its own, the number of M/WBEs interviewed in this case could be as high as 139, and, depending on the number of new people heard by the Denver Department of Public Works in March 1988 (see *id.* at 833), the number might have been even greater.

¹⁴⁸ *Rowe*, 615 F.3d at 238.



In 2002, Rowe was denied a NCDOT contract because the company's bid included 6.6% women subcontractor participation and no minority subcontractor participation. NCDOT claimed that Rowe failed to meet the good faith effort requirements.

A third study was commissioned in 2004 to again study minority and women contractor participation on the State's highway construction industry. In 2006, relying on the 2004 study, the Assembly amended Statute 136-28.4. The principle modifications were:

- Remedial action should only be taken when there is a strong basis in evidence of ongoing effects of past or present discrimination that prevents, or limits disadvantaged 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
- A sunset provision should be included

First, the court considered whether the statutory scheme as it relates to minorities survives the *strict scrutiny* standard. The circuit court reviewed the statistical evidence detailed in the 2004 disparity study to determine if the statutory scheme was based on strong statistical evidence to implement race-conscious subcontractor goals. 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 standards set forth in the 2004 disparity study.

The court did not consider whether the statistical methodology employed in the 2004 disparity study was sufficient to support a compelling state interest. The court noted and accepted that the statistical measure to determine whether the underutilization of minorities on the State's subcontracts was statistically significant was the disparity index. The 2004 disparity study calculated a disparity at .05 confidence level. A statistical calculation is significant at the .05 confidence level because the probability of that result occurring by chance is 5% or less.¹⁴⁹ The .05 confidence level is used in social sciences as a marker of when a result is a product of some external influence, rather than ordinary variation or sampling error.¹⁵⁰

The circuit court admonished that 'the study itself sets out the standard by which one could confidently conclude that discrimination was at work,' but the standard was not followed in the State's statutory scheme.¹⁵¹ The statistical evidence in the 2004 disparity study demonstrated that African American and Native American subcontractors were underutilized at a confidence level of .05. Hispanic American and Asian American subcontractors were also underutilized but not at a .05 confidence level. The 2004 Study determined that underutilization was not statistically significant.

¹⁴⁹ Fourth Circuit Court citing, *Research Methods and Statistics: A Critical Thinking Approach*, Sherri L. Jackson, (3ed. 2009).

¹⁵⁰ Fourth Circuit Court citing, *The Practice of Social Research*, Earl Babbie, (12th ed. 2010).

¹⁵¹ *Rowe*, 615 F.3d at 261.



Therefore, the statutory scheme was ruled *narrowly tailored* to achieve the State's *compelling interest* as it relates to African American and Native American subcontractors but not Hispanic American and Asian American subcontractors. Thus, the State provided a strong basis in evidence for minority subcontractor participation goals pertaining to African American and Native American subcontractors.

Second, the circuit court considered whether 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. 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 level. The circuit court further noted that the private-sector evidence was insufficient to overcome the strong evidence of overutilization. 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.

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 M/WBE program to be *narrowly tailored*, there must be a statistical finding of underutilization of minority subcontractors. Where 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.

In the Fifth Circuit it is equally important that the governmental entity adopt particularized findings of discrimination both statistically significant underutilization for MBEs and underutilization for WBEs. In *W.H. Scott Construction v. City of Jackson*, the City conducted a disparity study but never adopted the findings of the study. During the litigation, the City attempted to rely upon the disparity study findings to support the MBE program. The Court in that case stated that "whatever probity the study's findings might have had on our analysis is of no moment".¹⁵² The City refused to adopt the study when it was published in 1995 and found that the belated attempt to use the study in the context of the current litigation was unpersuasive.¹⁵³ In short, the Fifth Circuit found that the City of Jackson failed to establish a compelling interest because it did not take legislative action to adopt the study.



¹⁵² 199 F.3d at 218.

¹⁵³ *Id.*

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 racial discrimination places MBEs at a competitive disadvantage, an MBE program may seek to counteract the situation by providing MBEs with a counterbalancing advantage.¹⁵⁴ On the other hand an MBE program cannot stand if the sole barrier to minority or woman-owned business participation is a barrier that is faced by all new businesses, regardless of ownership.¹⁵⁵ 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.¹⁵⁶ In other words if the barriers to minority participation are race-neutral, then the program must be race-neutral or contain race-neutral aspects.

The requirement that race-neutral measures be considered does not mean that they must be exhausted before race-conscious remedies can be employed. The district court recently wrote in *Hershell*:

The Supreme Court has recently 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[.]” *Gratz*, 123 S.Ct, at 2344, 2345. The County has failed to show the necessity for the relief it has chosen, and the efficacy of alternative remedies has not been sufficiently explored.¹⁵⁷

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. If the evidence shows that in addition to capital and bonding requirements, which are race-neutral, MBEs also face racial discrimination in the awarding of contracts, then a race-conscious program will stand, so long as it also includes race-neutral measures to address the capital and bonding barriers.¹⁵⁸

The Ninth Circuit in *Coral Construction* ruled that there is no requirement that an entity exhaust every possible race-neutral alternative.¹⁵⁹ 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 contracts programs that have been implemented to improve MBE utilization should also be measured.¹⁶⁰

¹⁵⁴ *AGCC II*, 950 F.2d at 1404.

¹⁵⁵ *Croson*, 488 U.S. at 508.

¹⁵⁶ *Id.* at 507.

¹⁵⁷ *Hershell*, 333 F.Supp. 2d at 1330 (quoting *Gratz v. Bollinger*, 123 S. Ct 2411 (2003)); *Grutter v. Bollinger*, 539 U.S. 306 (2003).

¹⁵⁸ *Id.* (upholding MBE program where it operated in conjunction with race-neutral measures aimed at assisting all small businesses).

¹⁵⁹ *Coral Constr.*, 941 F.2d at 923.

¹⁶⁰ *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



VI. United States Department of Transportation Disadvantaged Business Enterprise Program

In *Adarand*, the United States Supreme Court applied the strict scrutiny standard established in *Croson* to federal disadvantaged business enterprise (DBE) programs. In response to the Supreme Court's decision in *Adarand*, USDOT revised provisions of the DBE rules, 49 CFR Part 26, effective March 1999. The objective for promulgating the revised rule was to modify the DBE program consistent with the "narrow tailoring" requirement of *Adarand*. The revised provisions applied to United States Department of Transportation (USDOT) airport, transit, and highway financial assistance programs. Effective February 28, 2011, the USDOT DBE rules were again amended. The amendment to 49 CFR Part 26 as described in the Federal Register, Volume 76, No. 19 required recipients to incorporate a Small Business Enterprise component in their DBE Program by February 28, 2012.¹⁶¹

Since *Adarand*, there have been several challenges to the 1997 amended DBE regulations. The Third, Seventh, Eighth, and Ninth Circuits were the circuits to apply *Croson* to the amended DBE regulations. The precedent set by each federal circuit court is instructive and discussed herein. The following discussion reviews the major developments in the case law, which considered constitutional challenges to the DBE regulations.

A. Analysis of the Eighth Circuit Challenges

Sherbrooke Turf Inc. v. Minnesota Department of Transportation and *Gross Seed Co. v. Nebraska Dep't of Roads*¹⁶² is a 2003 joint decision. In both cases, the district courts found that the revised DBE Program, as amended in 1999, met the strict scrutiny standard prescribed in *Adarand*.

On appeal, the circuit court held that Congress had a "compelling interest" to enact the legislation because it "had a sufficient evidentiary basis on which to conclude that the persistent racism and discrimination in highway subcontracting warranted a race-conscious procurement program."

For the court's "narrow tailoring" examination, it looked at the DBE regulations. The Eighth Circuit Court held that five factors demonstrated that the program was narrowly tailored on its face. Those factors were: (1) the emphasis on the use of race-neutral measures to meet goals; (2) the substantial flexibility allowed; (3) goals were tied to the local market; (4) participation was open to all small businesses that could show that they were socially and economically disadvantaged; and (5) the personal net worth standard of \$750,000 or less.

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* the discussion of narrow tailoring in *Concrete Works*, *Adarand*, *County of Cook*, and *City of Chicago*.

¹⁶¹ As described in the Federal Register, Volume 76, No. 19.

¹⁶² 345 F.3d 964 (8th Cir. 2003).



The circuit court then examined whether the program was narrowly tailored *as applied* by Minnesota and Nebraska in its local labor markets. Each state retained a consultant to examine local conditions. In Minnesota, the consultant followed the regulations' two-step goal setting process, reducing the availability it found by the precipitous drop in DBE participation when the program was suspended. In Nebraska, the consultant determined the DBE availability in the four years before the program was amended in 1999 to make clear that the 10% goal was not mandatory. After determining what decisions had been reached on a race-neutral basis the consultant predicted the amount of the availability that would require race and gender-conscious subcontracting. The Eighth Circuit rejected the plaintiffs' appeal based on the evidence presented by the consultant.¹⁶³

B. Analysis of the Ninth Circuit Challenges

The Ninth Circuit case that challenged the constitutionality of a DBE program, *Western States Paving Co. v. Washington State Department of Transportation (Western States)*,¹⁶⁴ was decided in the Ninth Circuit Court of Appeals in 2006 and is discussed below.

1. Western States

Western States, decided in 2005, subjected the State of Washington's Department of Transportation DBE Program to a two-pronged analysis. One aspect of the analysis determined whether or not the USDOT DBE legislation was facially constitutional, and the other assessed whether or not the State of Washington's application of the DBE regulations was valid.

• Facial Constitutional Challenge

In *Western States*, the plaintiff sought a declaratory judgment arguing that the 1998 Transportation Equity Act for the 21st Century's (TEA-21) preference program was in violation of the equal protection provision under the Fifth and Fourteenth Amendments of the U.S. Constitution. The TEA-21 DBE Program on its face and as applied by the State of Washington was claimed to be unconstitutional. In addressing *Western States*' facial challenge, the Court interpreted the issue as to whether or not the United States met its burden of demonstrating that the federal statute and regulations satisfied the strict scrutiny's exacting requirements.

According to *Croson*, the federal government has a compelling interest in ensuring that its funding is not distributed in a manner that perpetuates the effects of either public or private discrimination within the transportation contracting industry.¹⁶⁵ Thus, the Court evaluated the evidence that Congress considered in enacting the DBE statute to ensure it had a "strong basis in evidence for its conclusion that remedial action was necessary."¹⁶⁶ The Court concluded that a substantial body

¹⁶³ The Seventh Circuit is in accord. *Northern Contracting Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (2007). The consultant's methodology was consistent with the flexible nature of the DBE regulations: 1) use of its 'custom census' was acceptable method to determine Step 1 availability; 2) was not required to separate prime and subcontracting availability; and 3) reasonably determined amount of goal that would use race neutral means.

¹⁶⁴ *W. States Paving Co. v. Washington State Dep't of Transp.*, 407 F.3d 983 (9th Cir. 2005).

¹⁶⁵ *Croson*, 488 U.S. at 492.

¹⁶⁶ *Id.* at 493.



of statistical and anecdotal evidence was considered by Congress at the time the law was enacted. Therefore, the Court found that Congress had a strong basis in evidence for concluding that at least in some parts of the country there was discrimination within the transportation contracting industry that hindered minorities' ability to compete for federally funded contracts.¹⁶⁷

Next, the Court considered whether the DBE regulation's racial classification was narrowly tailored as represented in the State of Washington's DBE goals. Citing *Croson*, *Western States* decided that a minority preference program must establish utilization goals that bear a close relationship to minority firms' availability in a particular market in order to be narrowly tailored.¹⁶⁸ The Court referenced *Sherbrooke*, noting that the Eighth Circuit in holding that the DBE programs of the Minnesota and Nebraska Departments of Transportation independently satisfied the strict scrutiny's narrow tailoring requirement by relying upon two disparity studies.

The Minnesota Department of Transportation (MnDOT) offered statistical evidence of the highway contracting market in Minnesota. Following the goal setting methodology set forth in 49 CFR Section 26.45(c), MnDOT formulated a factual predicate that illustrated the DBE availability in MnDOT's relevant market area. Findings from the statistical analysis of business formation statistics were used to adjust the base figure upward based on the rationale that the number of participating minority-owned businesses would be higher in a race-neutral market.

MnDOT implemented good faith efforts to encourage prime contractors to meet the DBE goal. The availability of DBEs and the extent of subcontracting opportunities for each project were considered when setting the race-conscious portion of the overall DBE goal. The Eighth Circuit court agreed with the district court that MnDOT's revised DBE Program served a compelling government interest and was narrowly tailored on its face and as applied in Minnesota. Similarly, the Nebraska Department of Transportation (NDOT) also set an overall DBE goal pursuant to the DBE regulations for the Nebraska highway construction market. Like Minnesota, the Eighth Circuit found that NDOT's DBE Program was narrowly tailored. The Court notes that the DBE regulations did not establish a mandatory nationwide minority utilization goal in transportation contracting. The Court found that the 10% DBE utilization goal in the regulation was only "aspirational" and that the regulation provides that each state must establish a DBE utilization goal based upon the proportion of ready, willing, and able DBEs in its transportation contracting industry.¹⁶⁹ Because the regulations require each state to set minority utilization goals that reflect the contractor availability in its own labor market, the Court found the DBE regulations to be narrowly tailored to remedy the effects of race and sex-based discrimination within the transportation contracting industry. The Court ultimately held that it was satisfied that TEA-21's DBE program was narrowly tailored to remedy the effects of race and sex-based discrimination within the transportation contracting industry, and thus *Western States*' facial challenge failed.



¹⁶⁷ *W. States Paving Co.*, 407 F.3d at 983.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

- **Application of the Narrowly Tailored Standard in Overall Goal Setting**

The second prong of the Court’s analysis considered whether or not the utilization goals established by the State of Washington “as applied” were unconstitutional. The *Western States* court reasoned that, in order for the State of Washington to meet the narrowly tailored requirement, the state must produce independent evidence of discrimination. The State contended that its implementation of the DBE Program was constitutional, because it comported with the federal statute and regulations. The State also proffered that since the proportion of DBEs in the state was 11.17% and the percentage of contracting funds awarded to them on race-neutral contracts was only 9%, discrimination was demonstrated.¹⁷⁰ The Court disagreed with the rationale. It found that this oversimplified statistical evidence is entitled only little weight, because it does not account for factors that may affect the relative capacity of DBEs to undertake contracting work.

The Ninth Circuit opined that the only other circuit to consider an applied challenge to the federal DBE program was the Eighth Circuit in *Sherbrook*. In discussing the Eighth Circuit’s opinion in *Sherbrook*, the Ninth Circuit reasoned that both Minnesota and Nebraska had hired outside consulting firms to conduct statistical analyses of the availability and capacity of DBEs in their local market. Accordingly, *Western States* concluded that the Eighth Circuit had relied on the statistical evidence in the studies to hold that the State’s DBE program was narrowly tailored and satisfied strict scrutiny.

Citing *Croson*, the court opined that recipients of federal funds could not use race-conscious methods to meet their DBE goals without a finding of discrimination. The Ninth Circuit also concluded that in order to satisfy the narrowly tailored requirement even when discrimination is present, the State may only implement a remedial race-conscious program including those minority groups that have actually suffered discrimination. The Ninth Circuit found insufficient evidence suggesting that minorities currently or previously suffered discrimination in the Washington transportation contracting industry. Further, the court found that the State of Washington failed to provide evidence of discrimination within its own contracting market and thus failed to meet its burden of demonstrating that its DBE program was narrowly tailored to further Congress’s compelling remedial interest.¹⁷¹

The court concluded that the district court erred when it upheld the State’s DBE program simply because the State complied with the federal program’s requirement. Washington’s DBE program was categorized as an “unconstitutional windfall to minority contractors solely on the basis of their race or sex.”

In sum, *Western States* found that Washington’s DBE program met the first prong of the test and was held facially constitutional. However, it did not pass the second prong because the State’s application of the DBE regulations was not narrowly tailored to a finding of statistically significant

¹⁷⁰ *Id.*

¹⁷¹ *Western States Paving Co.*, 407 F.3d at 983.



underutilization of the respective minority groups. Therefore, the State’s application of the DBE regulations was deemed unconstitutional.

- **Evidentiary Requirements for Overall Goal Setting**

In response to *Western States*, the USDOT issued a Memorandum in 2005 recommending a disparity study that adheres to the evidentiary standards set forth in *Croson*, as the appropriate method for USDOT recipients in the Ninth Circuit to formulate narrowly tailored DBE goals.¹⁷² The Ninth Circuit has established the highest constitutional standards for race-conscious DBE programs. This methodology is persuasive to the Second and Third Circuit.

2. Associated General Contractors

Associated General Contractors of America, San Diego Chapter, Inc. v. California Department of Transportation (AGC I), filed in 2011 in the Eastern District of California, cited civil rights violations in the application of the California Department of Transportation’s (Caltrans) 2009 DBE Program.¹⁷³ The plaintiff charged that the Equal Protection Clause of the Fourteenth Amendment, the federal DBE program regulations, and the U.S. Constitution generally require that the Caltrans DBE Program be predicated on evidence showing intentional discrimination.¹⁷⁴ The remedial scheme regarding various groups based on Caltrans’ statistical evidence, the plaintiff argued, violated the nondiscrimination mandate of Title VI of the 1964 Civil Rights Act.¹⁷⁵ Additionally, the plaintiff argued that Caltrans, as a federal grantee, did not demonstrate that it would lose its federal funds if it did not implement the 2009 DBE program.¹⁷⁶

Specifically, the plaintiff challenged Caltrans’ application of the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” enacted by Congress in 2005.¹⁷⁷ The Act requires that a minimum of ten percent of federal dollars be expended with disadvantaged business enterprises (DBEs).¹⁷⁸

The plaintiff sought an injunction against Caltrans’ DBE program, declaring the program unconstitutional.¹⁷⁹ The plaintiff asserted that Caltrans must identify intentional acts of discrimination, and that failing to identify specific acts of intentional discrimination renders its

¹⁷² We note that the USDOT regulations, as demanded in 1992 recommends the use of a disparity study among other availability sources for setting the DBE goals.

¹⁷³ *Associated Gen. Contractors of America v. Cal. Dep’t of Transp. (AGC I)*, Hearing Transcript (Hr’g Tr.) 1:1-58:2 (March 23, 2011).

¹⁷⁴ *Id.* at Hr’g Tr. 46:4-7.

¹⁷⁵ *Associated Gen. Contractors of America v. Cal. Dep’t of Transp. (AGC II)*, 713 F.3d 1187, 1193 (9th Cir. 2013).

¹⁷⁶ *AGC I*, Hr’g Tr. 10:3-16.

¹⁷⁷ *Id.* at Hr’g Tr. 40:23.

¹⁷⁸ *Id.* at Hr’g Tr. 41:1-5.

¹⁷⁹ *Id.* at Hr’g Tr. 42:19-22.



program unconstitutional.¹⁸⁰ The program was also attacked on the ground that some of the categories included in the DBE goal did not include sufficient specific statistical evidence pertaining to minority women.¹⁸¹ The statistical evidence in the disparity study found disparities for minorities, but the findings were not broken down by gender.¹⁸²

To rebut the plaintiff's claim, Caltrans argued that its program met the requirements set forth in *Western States*' two-pronged test for narrow tailoring.¹⁸³ The two prongs were: the presence or absence of discrimination in the State's transportation contracting industry, and the narrowly tailored remedy limited to minority groups that actually had suffered discrimination.¹⁸⁴

The court compared the probative evidence presented in *Western States* and *AGC I*. It was determined in *Western States* that there was insufficient evidence of discrimination within the Department's own contracting market.¹⁸⁵ Thus, the State of Washington failed to meet its burden of demonstrating that its DBE program was narrowly tailored to further Congress's compelling remedial interest.¹⁸⁶ In *Western States*, the proportion of DBE firms in the State was compared with the percentage of contracts awarded to DBEs on race-neutral contracts to calculate a disparity.¹⁸⁷ This methodology was found by the Appellate Court to be oversimplified.¹⁸⁸

In contrast, the evidence Caltrans proffered was characterized by the District Court as extensive statistical and anecdotal evidence of discrimination in the California contracting industry.¹⁸⁹ On March 23, 2011, the District Court in *AGC I* granted summary judgment in favor of Caltrans.¹⁹⁰ The Court found that Caltrans met the standard set forth in *Croson* by identifying discrimination with "specificity," and by showing a pattern of "deliberate exclusion."¹⁹¹ The plaintiff appealed the District Court's decision to the Ninth Circuit Court of Appeal in *AGC II*. On April 16, 2013, Judge Jerome Harris delivered the opinion for the Ninth Circuit, dismissed the plaintiff's appeal, and upheld Caltrans' DBE Program ruling that it survived the strict scrutiny standard.¹⁹² Judge Harris opined that Caltrans presented sufficient evidence of discrimination in

¹⁸⁰ *Id.* at Hr'g Tr. 46:4-12.

¹⁸¹ *AGC I*, Hr'g Tr. 46:12-18.

¹⁸² *Id.* at Hr'g Tr. 46:18-21.

¹⁸³ *Id.* at Hr'g Tr. 47:3-17.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at Hr'g Tr.54:8-21.

¹⁸⁶ *Id.* at Hr'g Tr.54:8-22.

¹⁸⁷ *Id.* at Hr'g Tr.55:3-5.

¹⁸⁸ *Id.* at Hr'g Tr. 55:5-9.

¹⁸⁹ *Id.* at Hr'g Tr. 55:10-56:15.

¹⁹⁰ *Id.* at Hr'g Tr. 56:16.

¹⁹¹ *Croson*, 488 U.S. at 504, 509.

¹⁹² *ACG II*, 713 F.3d at 1200.



the California transportation contracting industry, and that the DBE Program was narrowly tailored to remedy the identified discrimination.¹⁹³

C. Analysis of the Seventh Circuit Challenges

1. Northern Contracting

Northern Contracting, Inc. v. Illinois Department of Transportation (NCI), decided in 2007, challenged Illinois Department of Transportation's (IDOT) application of its DBE program. The district court concluded that Northern Contracting Inc., a company specializing in the highway construction of guardrails and fences, failed to prove a constitutional violation against IDOT. The Seventh Circuit Court of Appeals considered whether or not IDOT had violated the Supremacy Clause of the Fourteenth Amendment of the United States Constitution in administering its DBE program, because Northern Contracting, Inc. asserted that IDOT's DBE program was designed to increase the participation of DBEs in Illinois highway construction subcontracts.¹⁹⁴

NCI initially alleged that: (1) TEA-21 and USDOT's regulations were outside the scope of Congressional power; (2) federal provisions violated the Fifth Amendment's guarantee of equal protection; and (3) the Illinois statute implementing the federal DBE requirement violated 42 U.S.C. §§ 1981, 1983, 2000(d) and the Fourteenth Amendment's Equal Protection Clause. The district court summarily sided with IDOT, concluding that the federal government had demonstrated a compelling interest. At trial, the district court ruled that IDOT's Fiscal Year 2005 DBE Program was narrowly tailored to the compelling interest identified by the federal government to remedy the effects of racial and gender discrimination in the Illinois highway construction market.

The appellate court also determined the district court's ruling that IDOT's DBE program was narrowly tailored. Additionally, *NCI's* contention that IDOT must adjust its goal based on local market conditions was characterized as unfounded by the court. IDOT correctly argued that 49 CFR Section 26.45(d) did not require the agency to make any adjustments to the base figure after the initial calculation but simply provides recipients with authority to make such adjustments, if necessary. The court also dismissed *NCI's* argument that IDOT violated 49 CFR Section 26.51 by failing to meet the maximum feasible portion of its overall goal through race-neutral means. IDOT demonstrated that all of the methods described in Section 26.51(b) to maximize the portion of the goal that could be achieved through race-neutral means were utilized by the department.

2. Midwest Fence

Midwest Fence Corporation (Midwest Fence) v. United States Department of Transportation (USDOT), et al., decided March 24, 2015 by the United States District Court for the Northern District Illinois, Eastern Division¹⁹⁵ and affirmed by the Seventh Circuit Court of Appeals on

¹⁹³ *Id.*

¹⁹⁴ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007).

¹⁹⁵ *Midwest Fence Corp. v. U.S. Dep't of Transportation*, 84 F. Supp. 3d 705 (N.D. Ill. 2015).



November 4, 2016,¹⁹⁶ involved a constitutional challenge to the Illinois Department of Transportation's (IDOT) DBE program. IDOT established DBE participation goals on its federally funded highway projects as required by USDOT recipients. Midwest Fence Corporation, a non-DBE, alleged that IDOT's DBE program violated its Fourteenth Amendment right to equal protection under the law.

At issue before the district court, was whether the factual predicate that supported IDOT's DBE program was sufficient to survive the equal protection challenge. In defense of its DBE program, IDOT presented evidence demonstrating a compelling governmental interest for the continuation of its program that is narrowly tailored to further that interest.¹⁹⁷ IDOT offered into evidence a post-enactment disparity study as the factual predicate for its DBE program. The court first determined that the availability analysis described in the disparity study met the two-step goal setting process set forth in the DBE regulations.¹⁹⁸ Additionally, the availability analysis was extolled by the court because available businesses were enumerated through seven different sources including bidder lists, prequalified business lists, and other methods recommended in 49 CFR Part 26.

Next, the district court reviewed the disparity analysis to determine whether a disparity exists between the utilization and availability of ready, willing, and able DBEs. However, before determining the sufficiency of the disparity analysis, the court assessed the "capacity" of the available businesses.¹⁹⁹ Capacity was defined by the court as a measure of business size that can potentially impact availability and disparity calculations.²⁰⁰ *Midwest Fence* alleged that the post-enactment study omitted capacity from its measure of available DBEs. IDOT presented evidence that capacity was addressed because the disparity analysis was limited to contracts under \$500,000 and argued that capacity as a variable made little difference because prime contracts of various sizes under \$500,000 were awarded to DBEs and non-DBEs at approximately the same rate.

After a careful review of the methodology employed in the post-enactment disparity study, the district court described the disparity analysis as the critical piece that established disparity thereby demonstrating an inference of discrimination. *Midwest Fence's* constitutional challenge was denied, and the district court granted IDOT's motion for summary judgment.²⁰¹

On appeal, the Seventh Circuit Court of Appeal affirmed the district court's decision that the 1) federal DBE program is facially constitutional, 2) IDOT established a substantial basis in evidence to support the need to remedy the effects of past discrimination in its market area, and 3) the program was narrowly tailored to serve that remedial purpose.²⁰²

¹⁹⁶ 840 F.3d 932 (7th Cir. Nov. 4, 2016).

¹⁹⁷ *Croson*, 488 U.S. at 498–506.

¹⁹⁸ 49 CFR Section 26.45.

¹⁹⁹ *Midwest Fence Corp.*, 84 F. Supp. 3d (N.D. Ill. 2015).

²⁰⁰ *Rothe*, 545 F.3d at 1043; *see also*, *Eng'g Contractors Ass'n of S. Fla. Inc. v. Metro. Dade County.*, 122 F.3d 895, 917 (11th Cir. 1997).

²⁰¹ *Midwest Fence Corp.*, 84 F. Supp. 3d (N.D. Ill. 2015).

²⁰² 840 F.3d 932 (7th Cir. Nov. 4, 2016).



VII. Conclusion

This chapter has examined what *Croson* and its progeny require for a government to institute a constitutional race or gender-conscious public contracting program when using federal funds. The decision of the United States Supreme Court in *Croson* changed the legal landscape for local government's business affirmative action programs. In *Croson*, the United States Supreme Court imposed the highest legal standard on the government's use of local funds to institute remedial race-conscious public contracting programs. *Adarand* applied the *Croson* legal standard to government's use of federal funds.

The disparity findings of the Metropolitan Transit Authority of Harris County's utilization of available M/WBEs are presented in *Chapter 7: Prime Contract Disparity Analysis* and *Chapter 8: Subcontract Disparity Analysis*.



VIII. List of Authorities

A. Cases

Cases	Page(s)
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<i>Associated Gen. Contractors v. Coal. for Econ. Equity (AGCC II)</i> , 950 F.2d 1401 (9th Cir. 1991)	<i>passim</i>
<i>Associated Gen. Contractors v. New Haven</i> , 791 F. Supp. 941 (D. Conn. 1992)	7
<i>Builders Ass’n of Greater Chi. v. City of Chi.</i> , 298 F. Supp. 2d 725 (N.D. Ill. 2003)	13
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<i>City of Richmond v. J.A. Croson Co.</i> , 488 U.S. 469 (1989)	1, 34
<i>Concrete Works of Colo., Inc. v. City & Cnty. of Denver (Concrete Works I)</i> , 823 F. Supp. 821 (D. Colo. 1993)	15, 21, 23
<i>Concrete Works of Colo., Inc. v. City & Cnty. of Denver (Concrete Works II)</i> , 36 F.3d 1513 (10th Cir. 1994)	<i>passim</i>
<i>Concrete Works of Colo., Inc. v. City & Cnty. of Denver (Concrete Works III)</i> , 86 F. Supp. 2d 1042 (D. Colo. 2000)	15
<i>Concrete Works of Colo., Inc. v. City & Cnty. of Denver (Concrete Works IV)</i> , 321 F.3d 950 (10th Cir. 2003)	<i>passim</i>



<i>Cone Corp. v. Hillsborough Cnty.</i> , 908 F.2d 908 (11th Cir. 1990)	15, 19
<i>Contractors Ass’n of E. Pa. v. City of Philadelphia (Philadelphia IV)</i> , 6 F.3d 990 (3d Cir. 1993)	<i>passim</i>
<i>Contractors Ass’n of E. Pa v. City of Philadelphia (Philadelphia VI)</i> , 91 F.3d 586 (3rd Cir. 1996)	7, 9, 22
<i>Coral Constr. Co. v. King County</i> , 941 F.2d 910 (9th Cir. 1991)	4
<i>Eng’g Contractors Ass’n v. Metro. Dade Cnty. (Dade County I)</i> , 943 F. Supp. 1546 (S.D. Fla. 1996)	8, 10
<i>Eng’g Contractors Ass’n v. Metro. Dade Cnty. (Dade County II)</i> , 122 F.3d 895 (11th Cir. 1997)	<i>passim</i>
<i>Gratz v. Bollinger</i> , 123 S. Ct. 2411 (2003)	26
<i>Grutter v. Bollinger</i> , 539 U.S. 306 (2003)	26
<i>Hazelwood Sch. Dist. v. United States</i> , 433 U.S. 299 (1977)	14
<i>H.B. Rowe Co. v. N.C. Dep’t of Transp.</i> , 615 F.3d 233 (4th Cir. 2010)	4
<i>Houston Contractors Ass. v. Metropolitan Transit Authority of Harris County</i> , 993 F. Supp 545 (S.D. Tex. 1997)	1
<i>Midwest Fence Corp. v. United States Dep’t of Transp.</i> , 840 F.3d 932 (7th Cir. 2016)	9,35
<i>Monterey Mech. Co. v. Pete Wilson et al.</i> , 125 F.3d 702 (9th Cir. 1997)	14
<i>Shaw v. Hunt</i> , 517 U.S. 899 (1996).....	12
<i>Sherbrooke Turf Inc. v. Minnesota Department of Transportation</i> , 345 F.3d 964 (8th Cir. 2003)	1,27



<i>W. H. Scott Construction Co. v. City of Jackson</i> , 407 F.3d 983 (5th Cir. 1999)	8
<i>Western States Paving Co. v. State of Washington Dept. of Transportation</i> , 407 F.3d 983 (9th Cir. 2005)	1, 2, 28, 29
<i>Wygant v. Jackson Bd. of Educ.</i> , 476 U.S. 267 (1986)	7, 8



B. Statutes

42 U.S.C. Section 14000 et seq.

49 CFR Part 26.

Cal. Const., Article I, Section 31.

Cal. Public Contracting Code, Section 2002.



CHAPTER 2: Procurement Review

I. Introduction

This chapter is an overview of the Metropolitan Transit Authority of Harris County (METRO), procurement policies. The relevant statutes, regulations, and manuals governing METRO's construction, professional services, and goods and services procurements during the October 1, 2013, to September 30, 2018 study period are examined.

METRO was created in 1978 when Harris County voters approved the referendum that was codified a year later under Chapter 451 of the Texas Transportation Code. METRO's Board of Directors is authorized to adopt the rules governing the procurement, solicitation, and award process. The Board consists of nine members. METRO's system services the cities of Bellaire, Bunker Hill Village, El Lago, Hedwig Village, Hilshire Village, Houston, Humble, Hunters Creek, Katy, Missouri City, Piney Point, Southside Place, Spring Valley, Taylor Lake Village, West University Place, and portions of unincorporated Harris County.

II. Governing Laws and Regulations

The applicable legislation governing METRO's procurement policies and procedures is presented in Table 2.1.

Table 2.1: METRO's Governing Laws and Regulations

State of Texas
Texas Transportation Code Chapter 451 Texas Government Code Chapters 2253, 2254.002, 2258
Administrative Policies
Metropolitan Transit Authority of Harris County, Texas Procurement Manual (version 4.3 1-17-2019) Metropolitan Transit Authority of Harris County, Texas Disadvantaged Business Enterprise Program, Per 49 CFR Part 26, (2018)
Federal
49 United States Code Section 5325(d)(1) 49 Code of Federal Regulations Part 26 2 Code of Federal Regulations Part 200 49 U.S.C. Section 5323(j) / FAST Section 3011 Federal Transit Administration Circular Federal Transit Authority Circular 4220.1F Federal Transit Administration Master Agreement (Fiscal Year 2019) Davis-Bacon Act (40 USC 276a to 1-7) Department of Labor Regulations (29 CFR Part 3). Department of Labor Regulations (29 CFR Part 5) Department of Labor Regulations (41 CFR Part 60)



III. Industry Definitions

Construction: services associated with the construction, alteration, or repair of real property.²⁰³

Professional Services: practice of accounting, architecture, landscape architecture, land surveying, medicine, optometry, professional engineering, real estate appraising, professional nursing, and services connected with the services.²⁰⁴

Goods and Services: non-inventory items that are necessary to complete work, including office supplies and paper.²⁰⁵ Services include the furnishing of labor, time, or effort by a contractor not involving the delivery of a specific product or service other than professional services.

IV. Procurement Process and Procedures

A. Overview

It is the policy of METRO to purchase goods and services through an open and competitive process in order to obtain the best value for taxpayers and to promote equitable economic participation by all segments of Harris County. The Chief Procurement Officer or designee is responsible for the procurement of equipment, supplies, materials, services, and construction. When competition is not available or when it is determined in the best interest of METRO to utilize means other than full and open competition, sole source or emergency procurements can be purchased through a non-competitive process.

METRO's procurement process for the solicitation of construction and goods and services include small purchases and competitive sealed bids. The procurement process for professional services includes small purchases and negotiated contracts. Non-competitive procurements include sole source purchases, and emergency purchases.

Small purchases are solicited through price quotations for construction and goods and services contracts valued at \$50,000 and under. Small purchases for professional services valued at \$50,000 and under are procured based on qualifications. Competitive sealed bids are solicited through invitations bids (IFB) for construction and goods and services contracts valued at over \$50,000. Negotiated contracts for professional services contracts valued at over \$50,000 are solicited through request for qualifications (RFQ) and request for proposals (RFPs).



²⁰³ Federal Transit Administration Circular Federal Transit Authority Circular 4220.1F.

²⁰⁴ *Metropolitan Transit Authority of Harris County, Texas Procurement Manual*, page 40 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.

²⁰⁵ *Metropolitan Transit Authority of Harris County, Texas Procurement Manual*, page 46 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.

B. Small Purchases

The small purchase method is utilized to procure equipment, materials and supplies, non-personal services, construction services, and professional services valued at \$50,000 and under. METRO prohibits dividing contracts into small purchases to avoid the competitive solicitation process.

Small purchases are acquired through: 1) petty cash for micro-purchases valued up to \$150; 2) purchasing cards (P-cards) for small dollar items in lieu of petty cash and check requests; 3) check requests for purchases valued at \$25,000 and under during a 12-month rolling timeframe; 4) blanket purchase card account for incremental small purchases of items from specified vendors;²⁰⁶ and 5) blanket purchasing credit agreements (BPCA) for portions of an procurement with a P-Card that totals less than \$50,000. The term for BPCAs are one year. The term can be extended if the agreement is not fully encumbered.

Requests for price quotations for small purchases are solicited by the buyer or contract administrator. There are no requirements to advertise small purchases. The price quotation requirements are described below in Table 2.2.

Table 2.2: Price Quotation Requirements

Price Quotation Requirements	
Small Purchase Amount	Small Purchases
\$10,000 and under	One verbal quote
\$10,001 to \$15,000	Two verbal quotes
\$15,001 to \$50,000	Three written quotes

Small purchases valued at \$10,000 and under must be evaluated using a fair and reasonable method. Factors considered in determining a reasonable price include a published price, comparison to prior purchases of same or similar items, value analysis, established market prices, and comparison with an independent estimate.²⁰⁷ The buyer or contract administrator is responsible for determining when the price quoted is fair and reasonable.

C. Competitive Sealed Bid

Competitive sealed bids for construction and goods and services contracts valued at over \$50,000 are solicited through an invitation for bids.²⁰⁸

²⁰⁶ *Metropolitan Transit Authority of Harris County, Texas Procurement Manual*, page 41 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.. Blank purchases are “ ‘charge accounts’ between certain vendors and METRO for a specified period of time, with a specified dollar limitation as to both total amount and individual call amount and with a specific person or persons designated as the authorized ordering agent(s) to place orders or calls.”

²⁰⁷ *Metropolitan Transit Authority of Harris County, Texas Procurement Manual*, page 118 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.

²⁰⁸ “Texas Government Code, Chapter 2258, requires payment of the general prevailing rate of per diem wages, including legal holidays and overtime work, in the locality in which work is to be performed for each craft or type of worker needed to execute a public works contract on behalf of the state. This section prescribes the policies and procedures by which the Texas Department of Transportation will ascertain the prevailing rate of wages and will administer and enforce the prevailing rate of wages as required by Government Code, Chapter 2258.” Title 43, Part 1, Chapter 9, Subchapter A, Rule Section 9.5.



1. Advertising

A solicitation for a competitive sealed bid must be advertised. The notice is placed in the *Houston Chronicle* for no less than once a week for two consecutive weeks before the bid due date. The solicitation must be posted on METRO's website and in the Procurement Plan Room. Additionally, the advertisement may be placed in a national publication before the bid due date with written approval by the Chief Procurement Officer.

2. Bid Evaluation

IFBs are evaluated by the Contract Administrator for lowest responsive and responsible bid with consideration given to inspection, testing, quality, workmanship, delivery, and suitability for a particular purpose, unit, and/or total price. Contract administrators are authorized to reject bids as non-responsive to the bid's requirements.

a. Approval and Authorization of the Award

Approval from METRO's President and CEO is required for IFBs valued at: 1) under \$100,000 for construction, services, and non-standard supplies materials and equipment; and 2) under \$250,000 for standard off-the-shelf supplies, materials, equipment, and industry standard services.

Board approval is required for IFBs valued at: 1) over \$100,000 for construction, services, and non-standard supplies, materials, and equipment; and 2) over \$250,000 for standard off-the-shelf supplies, materials, equipment, and industry standard services.

3. Construction Bonding Requirements

Bonds are not required for construction projects estimated at \$25,000 and under.

a. Bid Bonds

Locally funded construction projects do not require a bid bond. A bidder shall be required to provide a certification from a bonding company certifying that the bidder can obtain a payment and performance bond. Bidders for federally funded construction solicitations and resulting contracts estimated to exceed \$25,000 must submit a bid bond amounting to 5% of its bid amount and a payment bond equal to 100% of the contract amount.

b. Performance Bonds

Performance bonds are not required for contracts valued at \$100,000 or less. For construction contracts, performance bonds are not required on projects valued at \$25,000 or less but are required on projects estimated to exceed \$25,000. The amount is equal to 100 percent of the contract amount.



c. Payment Bonds

Payment bonds are required to guarantee the payment of up to 100% of the contracted amount for the vendor's bills for labor, equipment, and materials. The payment bond may be reduced if the bond specifies a lesser percentage. Payment bonds are required for contracts greater than \$25,000. Payment bonds are not required for contracts valued at \$25,000 or less.

4. Services, Supplies, and Equipment Bonding Requirements

Bonds are not required for services, supplies, and equipment purchases estimated at \$50,000 and under. Bid, payment, or performance bonds may be required by if the Contract Administrator deems it is necessary to protect METRO's interests.

D. Competitive Negotiated Contracts

Professional services, including architecture and engineering services contracts valued at over \$50,000, are solicited through Requests for Qualifications (RFQs) and Requests for Proposals (RFPs). Chapter 2254.002 of Texas Government Code, Texas Professional Services Act governs the procurement method for professional services. Professional services include the services of the licensed professionals listed in Table 2.3.

Table 2.3: Professional Services

Professional Services	
Accounting	Certified public accountant
Architecture	Architect
Landscape architecture	Landscape architect
Land surveying	Land surveyor
Medicine	Physician/surgeon
Optometry	
Professional engineering	
Real estate appraising	
Professional nursing	

1. Request for Qualifications

A Request for Qualifications (RFQ) is the method used to solicit architecture and engineering services and other professional services pursuant to Chapter 2254.002 of the Texas State Code.²⁰⁹ A two-part, quality-based selection process is used to evaluate the qualification statements and make a recommendation for award before negotiating price. The evaluation of qualifications minimally includes the following criteria: 1) technical expertise, 2) firm capability, 3) team member expertise, and 4) ingenuity or creativeness in performing the project. Cost is not an evaluation factor.

²⁰⁹ The QBS solicitation method consistent with the Brooks Act and detailed in Title 40, sections 1101-1004 of the United States Code (USC) and Subpart 36.6 of the Federal Acquisition Regulation (FAR).



a. Evaluation and Recommendation for Award

The Technical Evaluation Committee (TEC) conducts its review considering the four criteria. The evaluation process may also include oral presentations before either the Technical Committee, an Executive Selection Committee, or the Board Selection Committee.

b. Approval and Authorization of Award

After the selection of the most qualified offeror, negotiations for a fair and reasonable price are undertaken with the number one-ranked firm. Factors considered when determining a fair and reasonable price include the project scope and complexity, the firm's professional nature, and the estimated value of the services.

Negotiated contracts valued at over \$100,000 require approval of the Board of Directors.

2. Request for Proposals

The request for proposals (RFP) is the method used to solicit professional, personal, and non-personal services to be performed by an individual or firm possessing special expertise or knowledge of a particular subject or field. The RFP may be used to solicit these services when the project's scope, specifications, and terms and conditions can be defined. The technical evaluation criteria, the determination of responsible offerors, and the criteria for the award are also specified in the RFP.

a. Best Value

Best value is an evaluation process used when the technical expertise of the proposer instead of the lowest price is a factor in ranking proposals during the evaluation process.

3. Advertising Requirements for Negotiated Procurements

The solicitation for competitive negotiated contracts (RFQs and RFPs) must be advertised. Solicitations for competitive negotiated contracts valued at over \$50,000 are posted in the Procurement Plan Room on the official notice board for at least 14 consecutive calendar days prior to award. The solicitation is also placed in the *Houston Chronicle* no less than once a week for two consecutive weeks before the proposal due date and on METRO's website at <https://www.ridemetroapp.org/procurement/solicitations.aspx>. Additionally, the advertisement may be placed in a national publication before the bid due date with written approval by the Chief Procurement Officer.

4. Debriefing Session for Negotiated Procurements

Debriefing sessions are offered to unsuccessful offerors for METRO to provide feedback and to assist in the preparation of a more competitive submittal. Vital insights offered by the selection



committee and documentation pertaining to the scoring process or the narrative appraisals are also available to the proposer.

E. Exceptions to the Competitive Procurement Process

1. Sole Source Purchases

A sole source purchase for construction and goods and services may be used when the small purchase or competitive sealed bid solicitation requirements are not feasible. The goods or services must be available from only one source. Generally, the Audit Department is responsible for conducting a cost analysis to determine the estimated cost and profit of a sole source purchase.

METRO's President and Chief Executive Officer or designee may approve sole source procurements valued from \$25,000 to \$100,000. Sole source contracts valued at over \$100,000 require Board of Directors approval.

2. Emergency and Urgent Purchases

Emergency procurements are utilized when a condition exists that creates an immediate and urgent need for goods, services, or construction that cannot be acquired through the normal procurement method. The potential delay in procuring the goods and services must seriously threaten either the:

- Functioning of METRO operations;
- Preservation or protection of property; or
- Health and safety of any person.

Urgent procurements are utilized when a condition exists that severely affects a user department's ability to carry out its responsibilities because the needed goods, services, or construction cannot otherwise be expeditiously procured.

For procurements valued at over \$50,000, an emergency must be declared by the President and Chief Executive Officer. Procurements valued at under \$50,000 must be deemed an emergency by the President and Chief Executive Officer in order to waive the small purchases solicitation requirements. The declaration of an emergency is subject to ratification by the Board of Directors at the Board meeting immediately following the decision.

3. Brand Name Purchases

Brand name purchases are only utilized after careful consideration of the specifications. The Vice President of the user department must approve the purchase and submit written justification to the Procurement and Materials Department detailing the justification for the name brand product.



V. *Small Business Enterprise and Disadvantaged Business Enterprise Programs*

A. *Background*

From its inception, METRO has been committed to ensuring equity in contracting with all segments of the business community within its service area. The Minority Business Enterprise Program was implemented in 1979 and included a 20% annual goal for minority business enterprises and 5% for non-minority women. In 1999, the United States Department of Transportation (USDOT) required its recipients of federal funding to implement a Disadvantaged Enterprise Program pursuant 49 Code of Federal Regulations Part 26. In 1990, METRO, a USDOT recipient, transitioned from a Minority Business Enterprise Program to a Disadvantaged Business Enterprise Program (DBE Program). A 21% goal was set for disadvantaged businesses.²¹⁰

Three years later, METRO's DBE Program was legally challenged with a claim that the program violated the equal protection clause of the 14th Amendment. METRO suspended its DBE Program in response to the preliminary injunction ordered by the court. In 1997, METRO implemented a race and gender-neutral business enterprise program entitled the Business Development Program. The Business Development Program established a 35% goal for small businesses. METRO ended its Business Development Program in 2005. METRO currently has a Small Business Enterprise Program and a Disadvantaged Business Enterprise Program (S/DBE Programs).

1. *Office of Small Business*

The Office of Small Business is responsible for the implementation and monitoring of METRO's S/DBE Programs. The objective of the Office of Small Business is to increase the participation of small businesses on METRO contracts. The office is charged with: 1) providing full and equal business opportunities for S/DBEs, 2) ensuring non-discrimination in the selection of vendors, 3) utilizing race and gender-neutral remedial measures to ensure full small business participation, 4) providing outreach and technical assistance to small businesses, 5) small business certification, and 6) tracking and monitoring compliance with the S/DBE Programs.

2. *Small Business Enterprise Certification Requirements*

METRO certifies small business enterprises. To be certified as an SBE, an eligible business must submit METRO's SBE certification application signed under penalty of perjury. The applicant must meet the following criteria:²¹¹

- An active business for at least one year.
- Minimum revenue of \$5,000 over the previous 12 months.



²¹⁰ Disadvantaged businesses were defined as Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, Asian Indian Americans, and women.

²¹¹ METRO Small Business Enterprise Program Fact Book, FY 2018.

- Gross receipts within the Small Business Administration revenue size standards.
- A personal net worth that does not exceed \$1,320,000 (per owner²¹²), excluding the value of the owner's primary residence.

3. Small Business Enterprise Goal

The Small Business Enterprise Program applies to federally funded or locally funded contracts valued at over \$100,000 with subcontracting opportunities and when there is sufficient small business capacity. Sole source contracts and contracts with other governmental entities are exempt from the program.

METRO has an annual aspirational Small Business Enterprise Goal of 35%. The SBE goal also applies to USDOT-funded projects, regardless to contract value, when there are subcontracting opportunities and available small business capacity. METRO does not establish DBE goals on its contracts.

4. S/DBE Programs Compliance

METRO has comprehensive pre-award and post-award compliance mechanisms to track and monitor the efficacy of its S/DBE Program. The compliance components include:

- Small business goal setting opportunities reviewed for solicitations with federal funds or local budgets of \$100,000 or greater.
- SBE Program requirements presented at pre-bid/proposal conferences.
- Solicitations for bids and proposals reviewed to identify opportunities to meet the SBE goal.
- Contracts with SBE goals are monitored for:
 - SBE goal achievement.
 - SBE/DBE subcontractor utilization.
 - Prompt payment of subcontractors.
 - 49 CFR Part 26 compliance.
- Process available to resolve disputes between prime contractors and SBE/DBE subcontractors.
- SBE goal achievement reported to project management, contract administration, and Executive Management on a monthly basis.
- SBE, including DBE, activities reported annually.
- DBE triennial overall goal setting for federally funded contracts.
- Subrecipient contracts monitored for DBE participation.
- DBE participation reports on federally funded projects submitted to the Federal Transit Administration bi-annually.



²¹² Owner is defined as an individual with at least a 5% interest in the business.

5. SBE/DBE Assistance

The Office of Small Business supports small businesses in navigating METRO's procurement process by providing capacity building assistance through METRO's Small Business University, Interagency Mentor-Protégé Program, networking events, prompt payment assistance, procurement notifications, and targeted outreach to small businesses.

B. Disadvantaged Business Enterprise Program

METRO's DBE Program is consistent with the USDOT's federal regulations set forth in 49 CFR Part 26. Pursuant to the federal DBE regulations, METRO's DBE Program's objective is to:

- Ensure nondiscrimination in the award and administration of USDOT-funded contracts.
- Create a level playing field to allow DBEs to compete fairly for USDOT-funded contracts.
- Ensure the program is narrowly tailored in accordance with applicable law.
- Monitor the program to ensure that only firms that meet the eligibility standards set forth in 49 CFR Part 26 are participating.
- Remove barriers to the participation of DBEs in USDOT-funded contracts.
- Assist in the development of firms that can compete successfully in the marketplace outside of the DBE Program.

1. DBE Race and Gender-Neutral Goal

METRO's DBE goal setting is based on the two-step requirements set forth in the DBE regulations.²¹³ Effective October 1, 2019, METRO's Overall DBE Triennial Goal for FFY 2020-2022 is 19%. This goal is to be met through race and gender-neutral measures.

2. DBE Certification

On February 12, 2002, METRO entered into an agreement to accept DBE certifications from the Texas Unified Certification Program (TUCP). The TUCP was established expressly as a certification program for USDOT-funded agencies in Texas. Applicants are required to submit a DBE application and a personal net worth statement for certification. Certified DBEs may receive an expedited SBE certification if they provide METRO with a copy of their TUCP DBE certification.



²¹³ 49 CFR Part 26, Section 26.51.

CHAPTER 3: Prime Contractor Utilization Analysis

I. Introduction

This chapter documents Metropolitan Transit Authority of Harris County's (METRO's) utilization of Minority and Woman Business Enterprise (M/WBE) and non-minority male-owned business enterprises by ethnicity, gender, and industry during the October 1, 2013 to September 30, 2018 study period. The contracts were classified into three industries—construction, professional services (including architecture and engineering), and goods and services.

- **Construction:** services the erection, alteration, or repair of real property.²¹⁴
- **Professional Services (including Architecture and Engineering):** practice of accounting, architecture, landscape architecture, land surveying, professional engineering, real estate appraising, and other services requiring a professional license or academic training.²¹⁵
- **Goods and Services:** non-inventory items that are necessary to complete work, including office supplies and paper, and labor, time, or effort by furnished by a contractor not involving the delivery of a specific product. .²¹⁶

Table 3.1 lists the seven ethnic and gender groups in which the businesses are classified.

Table 3.1: Business Ethnic and Gender Groups

Ethnicity and Gender Category	Definition
African Americans	Businesses owned by male and female African Americans
Hispanic Americans	Businesses owned by male and female Hispanic Americans
Asian-Pacific Americans	Businesses owned by male and female Asian-Pacific Americans
Subcontinent Asian Americans	Businesses owned by male and female Subcontinent Asian Americans



²¹⁴ Federal Transit Administration Circular Federal Transit Authority Circular 4220.1F.

²¹⁵ Metropolitan Transit Authority of Harris County, Texas Procurement Manual, page 40 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.

²¹⁶ Metropolitan Transit Authority of Harris County, Texas Procurement Manual, page 46 (version 4.3 1-17-2019); Section 2254.002 of the Texas Government Code.

Ethnicity and Gender Category	Definition
Native Americans	Businesses owned by male and female Native Americans
Caucasian Females	Businesses owned by Caucasian females
Non-minority Males	Businesses owned by non-minority males, and businesses that could not be identified as minority or Caucasian female-owned

II. *Prime Contract Data Sources*

The prime contract data are purchase orders issued during the October 1, 2013 to September 30, 2018 study period. The contract data was extracted from two financial systems, Oracle E-Business Suite (Oracle) and SAP.²¹⁷ The prime contract data were extracted from the two systems by METRO and Mason Tillman normalized the data.

The closed contracts extracted from the Oracle system were combined with the SAP records which included open contracts from Oracle and both open and closed contracts originally in SAP. Prime contracts were analyzed by Oracle contract, Oracle purchase order, SAP contract, SAP purchase order, and SRM number.

The combined dataset was scrubbed to remove duplicates, prime contracts awarded outside the study period, not-for-profit entities, state and other local government entities, utility companies, and claims/reimbursements.²¹⁸ After removing exclusions, the remaining prime contracts were classified into one of the three industries—construction, professional services, or goods and services. Industry was assigned to each contract based on prime vendor name, and the description of the contract or purchase order. METRO approved the industry classifications.

Several additional steps were undertaken to determine the ethnicity and gender of each prime contractor. The initial step determined whether the contractor was certified by METRO or another certifying agency. When available, the ethnicity and gender of the prime contractor was derived from the certification record. Additional public sources used to determine the ethnicity and gender of the non-certified contractors, included chamber of commerce directories, trade organization membership lists, and the internet. Internet research included a review of the company's website, and social media platforms, digital media, and business listings were perused to determine the

²¹⁷ Metro's financial management system was transferred from SAP to Oracle during the study period. The data from the two systems were combined and analyzed.

²¹⁸ Full list of EXCLUSIONS: Contract was canceled prior to work beginning, Contract with "Completed" status and Missing any Payments, Deleted, Duplicate contract, Duplicate Payment, Educational Institutions and Services, Employees Benefits/ Workers Compensations, Financial Institutions/Investment Company/Insurance/Payroll Service, Food Purveyors, Food Purveyors, Individual/Reimbursements/Judgments, Mail/Courier Services, Manufacturer, Media (Radio, TV, Newspaper), Medical/Healthcare/ Rehabilitation/Custodial Care, MegaStore, Missing Vendor Name, Non-Profit, On-Line Database Service, Out of study period, Personal Services, PO was Created by Mistake, PO was Rejected, No Approval, Public Utilities and Fuel, Publishing, Real Estate, Recreation, Revenue Contract with no Payments, Staffing/Employment, Telecommunication, Transportation/Travel Related, Vehicle Dealerships, Zero Amount, Registration and Tuition, Closed with Zero Payment Amount, Incorrect Prime Vendor, Not Found Online.



business owner's ethnicity and gender. Contractors that could not be located on the internet were surveyed and asked to identify their ethnicity and gender. Prime contractors whose ethnicity and gender could not be verified as minority or female using these methods were classified as non-minority male. The non-minority male category also included publicly traded corporations, employee-owned businesses, and 50/50 partnerships in which the partners were neither a minority nor a woman.²¹⁹

III. Thresholds for Analysis

METRO's prime contracts awarded in each industry are analyzed at three size thresholds: 1) all prime contracts; 2) informal prime contracts²²⁰ and 3) formal prime contracts. The informal and formal levels are both defined in the Metropolitan Transit Authority of Harris County, Texas Procurement Manual. However, for the disparity analysis an upper limit was defined as a threshold for the formal contracts included in the disparity analysis. The threshold, calculated to exclude outliers from the disparity analysis, was set for each industry. The methodology for defining the formal threshold for each industry is detailed below.

A. Informal Contract Thresholds

METRO has three informal thresholds for each industry. The informal thresholds, which are the same for each, are shown in Table 3.2.

Table 3.2: Informal Contract Thresholds by Industry

Industry	Informal Contract Threshold
Construction	<p>\$10,000 and Under</p> <p>\$10,001 to \$15,000</p> <p>\$15,001 to \$50,000</p>
Professional Services	
Goods and Services	



²¹⁹ See Section II: Prime Contract Data Sources for the methodology employed to identify the ethnicity and gender of METRO's utilized prime contractors.

²²⁰ Version 4.3 dated January 17, 2019.

B. Formal Contract Thresholds

The formal contract threshold as defined in the Procurement Manual is above \$50,000 for construction, professional services, and goods and services.

C. Formal Thresholds for Analysis

The formal contract threshold, as defined in METRO's Procurement Regulations, is unique to each industry. A distribution cluster analysis was undertaken to determine the characteristics of the data given the wide range of contract amounts in METRO's dataset. The distribution analysis revealed the presence of outliers in the dataset. Outliers were the atypical contract values that were notably different from the rest of the contract values in the dataset. To determine the outliers, both the upper and lower limits of the accepted contract values in the dataset were defined, and the 1.5 x interquartile range (IQR) rule was applied.²²¹

A distribution cluster analysis was undertaken to determine the characteristics of the data given the wide range of contract amounts in METRO's dataset. The distribution analysis revealed the presence of outliers in the dataset. To define the outliers the 1.5 x interquartile range (IQR) rule was applied.²²²

Calculating the interquartile range required identifying the value of the contract at the first quartile and the value of the contract at the third quartile. The distance, or the difference in value, between the first and third quartile was designated as the interquartile range. The interquartile range multiplied by 1.5 was subtracted from the first quartile to identify the lower limit of the accepted contract amount. The value of 1.5 multiplied by the interquartile range was then added to the third quartile to identify the upper limit of the accepted contract amount. Contracts that had an amount outside of the upper range were considered outliers and excluded from the formal contracts evaluated in the analysis of statistical significance presented in *Chapter 7 – Prime Contract Disparity Analysis*. Even so, the description of the contracts as presented in this chapter include the outliers to illustrate METRO's total spending during the study period.

The utilization analysis presented in this chapter includes the contract dataset with outliers to illustrate METRO's total spending during the study period. The high roller analysis in this chapter also includes the outliers. In addition, the contract dataset with the outliers removed are included in this chapter.

Formal thresholds for each industry with the outliers removed are valued between \$50,000 and \$3,530,000 for construction, between \$50,000 and \$1,560,000 for professional services, and between \$50,000 and \$670,000 for goods and services. Table 3.3 shows the formal contract thresholds for each of the industries with the outliers removed.



²²¹ The interquartile range (IQR) is a measure of variability, based on dividing a data set into quartiles.

²²² The interquartile range (IQR) is a measure of variability, based on dividing a data set into quartiles.

Table 3.3: Formal Contract Thresholds by Industry

Industry	Formal Contract Threshold
Construction	Over \$50,000 and under \$3,530,000
Professional Services	Over \$50,000 and under \$1,560,000
Goods and Services	Over \$50,000 and under \$670,000

IV. Prime Contractor Utilization

A. All Prime Contractors

As shown in Table 3.4, METRO issued 38,818 prime contracts during the October 1, 2013 to September 30, 2018 study period. The 38,818 prime contracts include outliers. The presentation of all contracts in this chapter are not included in *Chapter 7: Prime Contract Disparity Analysis*. The disparity analysis was only performed on contracts at the informal and formal thresholds as defined in tables 3.2 and 3.3.

The 38,818 prime contracts included 582 for construction, 852 for professional services, and 37,384 for goods and services. The payments made by METRO during the study period totaled \$598,483,022 for all 38,818 prime contracts. Payments included \$119,534,468 for construction, \$166,185,086 for professional services, and \$312,763,467 for goods and services.

**Table 3.4: Total Prime Contracts and Dollars Expended:
All Industries, October 1, 2013 to September 30, 2018**

Industry	Total Number of Contracts	Total Dollars Expended
Construction	582	\$119,534,468
Professional Services	852	\$166,185,086
Goods and Services	37,384	\$312,763,467
Total Expenditures	38,818	\$598,483,022



METRO expended \$598,483,022 prime dollars, as depicted in table 3.4, during the October 1, 2013 to September 30, 2018 study period. Table 3.5 presents the \$598,483,022 dollars awarded by ethnicity within each industry.

Table 3.5: Contract Dollars Expended by Ethnicity and Gender

Ethnicity	Construction		Professional Services (Including Architecture and Engineering)		Goods and Services	
	Amount of Dollars	Percent of Dollars	Amount of Dollars	Percent of Dollars	Amount of Dollars	Percent of Dollars
African Americans	\$9,452,646	7.91%	\$785,816	0.47%	\$10,961,083	3.50%
Asian-Pacific Americans	\$0	0.00%	\$2,467,219	1.48%	\$13,082,241	4.18%
Asian Subcontinent Americans	\$2,442,000	2.04%	\$1,547,647	0.93%	\$233,107	0.07%
Hispanic Americans	\$8,308,412	6.95%	\$15,225,427	9.16%	\$15,902,483	5.08%
Native Americans	\$0	0.00%	\$3,779	0.00%	\$151,959	0.05%
Caucasian Females	\$2,111,003	1.77%	\$5,470,007	3.29%	\$8,643,174	2.76%
Non-minority Males	\$97,220,407	81.33%	\$140,685,192	84.66%	\$263,789,421	84.34%
TOTAL	\$119,534,468	100.00%	\$166,185,086	100.00%	\$312,763,467	100.00%

B. Highly Used Construction Prime Contractors

METRO awarded a total of 582 construction contracts during the study period. As shown in Table 3.6, METRO's 582 construction prime contracts were awarded to 117 unique businesses.

Table 3.6: Construction Prime Contracts

Total Prime Contracts	582
Total Utilized Businesses	117
Total Expenditures	\$119,534,468

Table 3.7 shows the distribution of METRO's construction prime contracts by the number of businesses. Seven of the 117 businesses received \$82,636,705, or approximately 70% of the total construction prime contract dollars. The findings show that a small group of prime contractors received the majority of construction prime contract dollars awarded by METRO.



**Table 3.7: Construction Prime Contracts
Distributed by Number of Businesses**

Businesses	Total Dollars	Percent of Dollars²²³	Number of Contracts	Percent of Contracts²²⁴
7 Highly Used Businesses	\$82,636,705	70%	80	14%
110 Businesses	\$36,897,763	30%	502	86%
117 Total Businesses	\$119,534,468	100%	582	100.00%

Table 3.8 shows the ethnicity and gender of the most highly used construction prime contractors who received approximately 50% of the construction prime contract dollars. The most highly used prime contractors were non-minority males. The contracts received by these four businesses ranged from \$3,000 to \$28,847,820.

Table 3.8: Top Four Highly Used Construction Prime Contractors

Ethnicity/ Gender	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
Non-minority Males	\$63,791,401	53.37%	12	2.06%

C. Highly Used Professional Services Prime Contractors

METRO awarded a total of 852 professional services contracts during the study period. As shown in Table 3.9, METRO's 852 professional services prime contracts were received by 325 unique businesses.

Table 3.9: Professional Services Prime Contracts

Total Prime Contracts	852
Total Utilized Businesses	325
Total Expenditures	\$166,185,086

Table 3.10 shows the distribution of METRO's professional services prime contracts by the number of businesses. Eleven of the 325 businesses received \$115,441,188, or approximately 70% of the total professional services prime contract dollars. The findings show that a small group of prime contractors received the majority of professional services prime contract dollars spent by METRO.



²²³ Percentages are rounded to the nearest whole number.

²²⁴ Percentages are rounded to the nearest whole number.

**Table 3.10: Professional Services Prime Contracts
Distributed by Number of Businesses**

Businesses	Total Dollars	Percent of Dollars²²⁵	Number of Contracts	Percent of Contracts²²⁶
11 Highly Used Businesses	\$115,441,188	70%	33	4%
314 Vendors Received	\$50,743,898	30%	819	96%
325 Vendors Received	\$166,185,086	100%	852	100%

Table 3.11 shows the ethnicity and gender of the most highly used professional services prime contractors, who received approximately 50% of the professional services prime contract dollars. The four most highly used prime contractors were non-minority males. The contracts received by these four businesses ranged from \$1,574,021 to \$32,520,616.

Table 3.11: Top Four Highly Used Professional Services Prime Contractors

Ethnicity/ Gender	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
Non-minority Males	\$80,595,753	48.50%	6	0.70%

D. Highly Used Goods and Services Prime Contractors

METRO awarded a total of 37,384 goods and services contracts during the study period. As shown in Table 3.12, METRO's 37,384 goods and services prime contracts were received by 1,292 unique businesses.

Table 3.12: Goods and Services Prime Contracts

Total Prime Contracts	37,384
Total Utilized Businesses	1,292
Total Expenditures	\$312,763,467

Table 3.13 shows the distribution of METRO's goods and services prime contracts by the number of businesses. Thirty-one of the 1,292 businesses received \$219,062,112, or 70% of the total goods and services prime contract dollars. The findings show that a small group of prime contractors received the majority of goods and services prime contract dollars spent by METRO.



²²⁵ Percentages are rounded to the nearest whole number.

²²⁶ Percentages are rounded to the nearest whole number.

**Table 3.13: Goods and Services Prime Contracts
Distributed by Number of Businesses**

Businesses	Total Dollars	Percent of Dollars²²⁷	Number of Contracts	Percent of Contracts²²⁸
31 Highly Used Businesses	\$219,062,112	70%	18,848	50%
1,261 Vendors Received	\$93,701,355	30%	18,536	50%
1,292 Vendors Received	\$312,763,467	100%	37,384	100%

Table 3.14 presents the ethnicity and gender of the most highly used goods and services prime contractors, who received approximately 50% of the goods and services prime contract dollars. The ten most highly used prime contractors were Asian-Pacific Americans and non-minority males. The contracts received by these 10 businesses ranged from \$100 to \$16,310,468.

Table 3.14: Top 10 Highly Used Goods and Services Prime Contractors

Ethnicity/ Gender	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
Asian-Pacific Americans	\$8,950,833	2.86%	42	0.11%
Non-minority Males	\$145,692,106	46.58%	10,640	28.46%



²²⁷ Percentages are rounded to the nearest whole number.

²²⁸ Percentages are rounded to the nearest whole number.

E. All Prime Contracts by Industry

1. Construction Prime Contract Utilization: All Contracts

Table 3.15 summarizes all prime contract dollars expended by METRO on construction prime contracts. Minority-owned Business Enterprises (MBEs) received 16.90% of the construction prime contract dollars; Woman-owned Business Enterprises (WBEs) received 4.15%; and non-minority male-owned businesses (non-M/WBEs) received 81.33%.

African Americans received 49, or 8.42%, of all construction prime contracts awarded during the study period, representing \$9,452,646, or 7.91%, of the construction prime contract dollars.

Asian-Pacific Americans received no construction prime contracts awarded during the study period.

Subcontinent Asian Americans received 8, or 1.37%, of construction prime contracts awarded during the study period, representing \$2,442,000, or 2.04%, of the construction prime contract dollars.

Hispanic Americans received 65, or 11.17%, of all construction prime contracts awarded during the study period, representing \$8,308,412, or 6.95%, of the construction prime contract dollars.

Native Americans received no construction prime contracts awarded during the study period.

Caucasian Females received 36, or 6.19%, of all construction prime contracts awarded during the study period, representing \$2,111,003, or 1.77%, of the construction prime contract dollars.

Non-minority Males received 424, or 72.85%, of all construction prime contracts awarded during the study period, representing \$97,220,407, or 81.33%, of the construction prime contract dollars.

Minority Business Enterprises received 122, or 20.96%, of all construction prime contracts awarded during the study period, representing \$20,203,058, or 16.90%, of the construction prime contract dollars.

Woman Business Enterprises received 57, or 9.79%, of all construction prime contracts awarded during the study period, representing \$4,955,635, or 4.15%, of the construction prime contract dollars.



**Table 3.15: Construction Prime Contract Utilization:
All Contracts, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	49	8.42%	\$9,452,646	7.91%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	8	1.37%	\$2,442,000	2.04%
Hispanic Americans	65	11.17%	\$8,308,412	6.95%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	36	6.19%	\$2,111,003	1.77%
Non-minority Males	424	72.85%	\$97,220,407	81.33%
TOTAL	582	100.00%	\$119,534,468	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	16	2.75%	\$2,179,316	1.82%
African American Males	33	5.67%	\$7,273,330	6.08%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	2	0.34%	\$374,918	0.31%
Subcontinent Asian American Males	6	1.03%	\$2,067,082	1.73%
Hispanic American Females	3	0.52%	\$290,398	0.24%
Hispanic American Males	62	10.65%	\$8,018,014	6.71%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	36	6.19%	\$2,111,003	1.77%
Non-minority Males	424	72.85%	\$97,220,407	81.33%
TOTAL	582	100.00%	\$119,534,468	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	122	20.96%	\$20,203,058	16.90%
Woman Business Enterprises	57	9.79%	\$4,955,635	4.15%



2. Professional Services Prime Contract Utilization: All Contracts

Table 3.16 summarizes all contract dollars expended by METRO on professional services prime contracts. MBEs received 12.05% of the professional services prime contract dollars; WBEs received 6.74%; and non-M/WBEs received 84.66%.

African Americans received 29, or 3.40%, of all professional services prime contracts awarded during the study period, representing \$785,816, or 0.47%, of the professional services prime contract dollars.

Asian-Pacific Americans received 24, or 2.82%, of all professional services prime contracts awarded during the study period, representing \$2,467,219, or 1.48%, of the professional services prime contract dollars.

Subcontinent Asian Americans received 5, or 0.59%, of all professional services prime contracts awarded during the study period, representing \$1,547,647, or 0.93%, of the professional services prime contract dollars.

Hispanic Americans received 52, or 6.10%, of all professional services prime contracts awarded during the study period, representing \$15,225,427, or 9.16%, of the professional services prime contract dollars.

Native Americans received 1, or 0.12%, of all professional services prime contracts awarded during the study period, representing \$3,779, or 0.00%, of the professional services prime contract dollars.

Caucasian Females received 55, or 6.46%, of all professional services prime contracts awarded during the study period, representing \$5,470,007, or 3.29%, of the professional services prime contract dollars.

Non-minority Males received 686, or 80.52%, of all professional services prime contracts awarded during the study period, representing \$140,685,192, or 84.66%, of the professional services prime contract dollars.

Minority Business Enterprises received 111, or 13.03%, of all professional services prime contracts awarded during the study period, representing \$20,029,887, or 12.05%, of the professional services prime contract dollars.

Woman Business Enterprises received 113, or 13.26%, of all professional services prime contracts awarded during the study period, representing \$11,198,303, or 6.74%, of the professional services prime contract dollars.



**Table 3.16: Professional Services Prime Contract Utilization:
All Contracts, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	29	3.40%	\$785,816	0.47%
Asian-Pacific Americans	24	2.82%	\$2,467,219	1.48%
Subcontinent Asian Americans	5	0.59%	\$1,547,647	0.93%
Hispanic Americans	52	6.10%	\$15,225,427	9.16%
Native Americans	1	0.12%	\$3,779	0.00%
Caucasian Females	55	6.46%	\$5,470,007	3.29%
Non-minority Males	686	80.52%	\$140,685,192	84.66%
TOTAL	852	100.00%	\$166,185,086	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	18	2.11%	\$219,459	0.13%
African American Males	11	1.29%	\$566,357	0.34%
Asian-Pacific American Females	15	1.76%	\$545,996	0.33%
Asian-Pacific American Males	9	1.06%	\$1,921,223	1.16%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	5	0.59%	\$1,547,647	0.93%
Hispanic American Females	25	2.93%	\$4,962,840	2.99%
Hispanic American Males	27	3.17%	\$10,262,587	6.18%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	1	0.12%	\$3,779	0.00%
Caucasian Females	55	6.46%	\$5,470,007	3.29%
Non-minority Males	686	80.52%	\$140,685,192	84.66%
TOTAL	852	100.00%	\$166,185,086	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	111	13.03%	\$20,029,887	12.05%
Woman Business Enterprises	113	13.26%	\$11,198,303	6.74%



3. Goods and Services Prime Contract Utilization: All Contracts

Table 3.17 summarizes all contract dollars expended by METRO on goods and services prime contracts. MBEs received 12.90% of the goods and services prime contract dollars; WBEs received 8.22%; and non-M/WBEs received 84.34%.

African Americans received 675, or 1.81%, of all goods and services prime contracts awarded during the study period, representing \$10,961,083, or 3.50%, of the goods and services prime contract dollars.

Asian-Pacific Americans received 178, or 0.48%, of all goods and services prime contracts awarded during the study period, representing \$13,082,241, or 4.18%, of the goods and services prime contract dollars.

Subcontinent Asian Americans received 36, or 0.10%, of all goods and services prime contracts awarded during the study period, representing \$233,107, or 0.07%, of the goods and services prime contract dollars.

Hispanic Americans received 779, or 2.08%, of all goods and services prime contracts awarded during the study period, representing \$15,902,483, or 5.08%, of the goods and services prime contract dollars.

Native Americans received 15, or 0.04%, of all goods and services prime contracts awarded during the study period, representing \$151,959, or 0.05%, of the goods and services prime contract dollars.

Caucasian Females received 1,953, or 5.22%, of all goods and services prime contracts awarded during the study period, representing \$8,643,174, or 2.76%, of the goods and services prime contract dollars.

Non-minority Males received 33,748, or 90.27%, of all goods and services prime contracts awarded during the study period, representing \$263,789,421, or 84.34%, of the goods and services prime contract dollars.

Minority Business Enterprises received 1,683, or 4.50%, of all goods and services prime contracts awarded during the study period, representing \$40,330,873, or 12.90%, of the goods and services prime contract dollars.

Woman Business Enterprises received 2,522, or 6.75%, of all goods and services prime contracts awarded during the study period, representing \$25,712,353, or 8.22%, of the goods and services prime contract dollars.



**Table 3.17: Goods and Services Prime Contract Utilization:
All Contracts, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	675	1.81%	\$10,961,083	3.50%
Asian-Pacific Americans	178	0.48%	\$13,082,241	4.18%
Subcontinent Asian Americans	36	0.10%	\$233,107	0.07%
Hispanic Americans	779	2.08%	\$15,902,483	5.08%
Native Americans	15	0.04%	\$151,959	0.05%
Caucasian Females	1,953	5.22%	\$8,643,174	2.76%
Non-minority Males	33,748	90.27%	\$263,789,421	84.34%
TOTAL	37,384	100.00%	\$312,763,467	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	364	0.97%	\$1,517,344	0.49%
African American Males	311	0.83%	\$9,443,738	3.02%
Asian-Pacific American Females	51	0.14%	\$8,988,288	2.87%
Asian-Pacific American Males	127	0.34%	\$4,093,953	1.31%
Subcontinent Asian American Females	4	0.01%	\$175,912	0.06%
Subcontinent Asian American Males	32	0.09%	\$57,195	0.02%
Hispanic American Females	143	0.38%	\$6,245,248	2.00%
Hispanic American Males	636	1.70%	\$9,657,235	3.09%
Native American Females	7	0.02%	\$142,387	0.05%
Native American Males	8	0.02%	\$9,572	0.00%
Caucasian Females	1,953	5.22%	\$8,643,174	2.76%
Non-minority Males	33,748	90.27%	\$263,789,421	84.34%
TOTAL	37,384	100.00%	\$312,763,467	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	1,683	4.50%	\$40,330,873	12.90%
Woman Business Enterprises	2,522	6.75%	\$25,712,353	8.22%



F. Informal Contracts by Industry, Valued \$10,000 and under

1. Construction Prime Contract Utilization: Contracts Valued \$10,000 and Under

Table 3.18 summarizes all contract dollars expended by METRO on construction prime contracts valued \$10,000 and under. MBEs received 12.56% of the construction prime contract dollars; WBEs received 8.50%; and non-M/WBEs received 80.97%.

African Americans received 25, or 7.14%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$67,816, or 5.04%, of the construction prime contract dollars.

Asian-Pacific Americans received no construction prime contracts valued \$10,000 and under awarded during the study period.

Subcontinent Asian Americans received 1, or 0.29%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$3,200, or 0.24%, of the construction prime contract dollars.

Hispanic Americans received 21, or 6.00%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$97,979, or 7.28%, of the construction prime contract dollars.

Native Americans received no construction prime contracts valued \$10,000 and under awarded during the study period.

Caucasian Females received 16, or 4.57%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$87,049, or 6.47%, of the construction prime contract dollars.

Non-minority Males received 287, or 82.00%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$1,089,242, or 80.97%, of the construction prime contract dollars.

Minority Business Enterprises received 47, or 13.43%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$168,994, or 12.56%, of the construction prime contract dollars.

Woman Business Enterprises received 28, or 8.00%, of the construction prime contracts valued \$10,000 and under awarded during the study period, representing \$114,409, or 8.50%, of the construction prime contract dollars.



**Table 3.18: Construction Prime Contract Utilization:
Contracts Valued \$10,000 and under, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	25	7.14%	\$67,816	5.04%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	1	0.29%	\$3,200	0.24%
Hispanic Americans	21	6.00%	\$97,979	7.28%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	16	4.57%	\$87,049	6.47%
Non-minority Males	287	82.00%	\$1,089,242	80.97%
TOTAL	350	100.00%	\$1,345,286	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	12	3.43%	\$27,360	2.03%
African American Males	13	3.71%	\$40,456	3.01%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	1	0.29%	\$3,200	0.24%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	21	6.00%	\$97,979	7.28%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	16	4.57%	\$87,049	6.47%
Non-minority Males	287	82.00%	\$1,089,242	80.97%
TOTAL	350	100.00%	\$1,345,286	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	47	13.43%	\$168,994	12.56%
Woman Business Enterprises	28	8.00%	\$114,409	8.50%



2. Professional Services Prime Contract Utilization: Contracts Valued \$10,000 and under

Table 3.19 summarizes all contract dollars expended by METRO on professional services prime contracts valued \$10,000 and under. MBEs received 11.59% of the professional services prime contract dollars; WBEs received 15.20%; and non-M/WBEs received 80.54%.

African Americans received 16, or 3.90%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$75,618, or 4.64%, of the professional services prime contract dollars.

Asian-Pacific Americans received 12, or 2.93%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$32,803, or 2.01%, of the professional services prime contract dollars.

Subcontinent Asian Americans received 1, or 0.24%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$2,400, or 0.15%, of the professional services prime contract dollars.

Hispanic Americans received 14, or 3.41%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$74,174, or 4.55%, of the professional services prime contract dollars.

Native Americans received 1, or 0.24%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$3,779, or 0.23%, of the professional services prime contract dollars.

Caucasian Females received 24, or 5.85%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$128,239, or 7.87%, of the professional services prime contract dollars.

Non-minority Males received 342, or 83.41%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$1,311,777, or 80.54%, of the professional services prime contract dollars.

Minority Business Enterprises received 44, or 10.73%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$188,773, or 11.59%, of the professional services prime contract dollars.

Woman Business Enterprises received 50, or 12.20%, of the professional services prime contracts valued \$10,000 and under awarded during the study period, representing \$247,545, or 15.20%, of the professional services prime contract dollars.



**Table 3.19: Professional Services Prime Contract Utilization:
Contracts Valued \$10,000 and under, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	16	3.90%	\$75,618	4.64%
Asian-Pacific Americans	12	2.93%	\$32,803	2.01%
Subcontinent Asian Americans	1	0.24%	\$2,400	0.15%
Hispanic Americans	14	3.41%	\$74,174	4.55%
Native Americans	1	0.24%	\$3,779	0.23%
Caucasian Females	24	5.85%	\$128,239	7.87%
Non-minority Males	342	83.41%	\$1,311,777	80.54%
TOTAL	410	100.00%	\$1,628,789	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	10	2.44%	\$54,283	3.33%
African American Males	6	1.46%	\$21,335	1.31%
Asian-Pacific American Females	7	1.71%	\$20,563	1.26%
Asian-Pacific American Males	5	1.22%	\$12,240	0.75%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	1	0.24%	\$2,400	0.15%
Hispanic American Females	9	2.20%	\$44,460	2.73%
Hispanic American Males	5	1.22%	\$29,714	1.82%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	1	0.24%	\$3,779	0.23%
Caucasian Females	24	5.85%	\$128,239	7.87%
Non-minority Males	342	83.41%	\$1,311,777	80.54%
TOTAL	410	100.00%	\$1,628,789	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	44	10.73%	\$188,773	11.59%
Woman Business Enterprises	50	12.20%	\$247,545	15.20%



3. Goods and Services Prime Contract Utilization: Contracts Valued \$10,000 and under

Table 3.20 summarizes all contract dollars expended by METRO on goods and services prime contracts valued \$10,000 and under. MBEs received 5.16% of the goods and services prime contract dollars; WBEs received 6.93%; and non-M/WBEs received 89.00%.

African Americans received 569, or 1.66%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$1,176,739, or 2.04%, of the goods and services prime contract dollars.

Asian-Pacific Americans received 98, or 0.29%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$289,625, or 0.50%, of the goods and services prime contract dollars.

Subcontinent Asian Americans received 32, or 0.09%, of all goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$27,580, or 0.05%, of the goods and services prime contract dollars.

Hispanic Americans received 622, or 1.82%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$1,458,049, or 2.53%, of the goods and services prime contract dollars.

Native Americans received 12, or 0.04%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$20,009, or 0.03%, of the goods and services prime contract dollars.

Caucasian Females received 1,804, or 5.28%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$3,359,036, or 5.84%, of the goods and services prime contract dollars.

Non-minority Males received 31,058, or 90.83%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$51,221,508, or 89.00%, of the goods and services prime contract dollars.

Minority Business Enterprises received 1,333, or 3.90%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$2,972,001, or 5.16%, of the goods and services prime contract dollars.

Woman Business Enterprises received 2,290, or 6.70%, of the goods and services prime contracts valued \$10,000 and under awarded during the study period, representing \$3,985,986, or 6.93%, of the goods and services prime contract dollars.



**Table 3.20: Goods and Services Prime Contract Utilization:
Contracts Valued \$10,000 and under, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	569	1.66%	\$1,176,739	2.04%
Asian-Pacific Americans	98	0.29%	\$289,625	0.50%
Subcontinent Asian Americans	32	0.09%	\$27,580	0.05%
Hispanic Americans	622	1.82%	\$1,458,049	2.53%
Native Americans	12	0.04%	\$20,009	0.03%
Caucasian Females	1,804	5.28%	\$3,359,036	5.84%
Non-minority Males	31,058	90.83%	\$51,221,508	89.00%
TOTAL	34,195	100.00%	\$57,552,545	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	350	1.02%	\$412,721	0.72%
African American Males	219	0.64%	\$764,017	1.33%
Asian-Pacific American Females	22	0.06%	\$73,962	0.13%
Asian-Pacific American Males	76	0.22%	\$215,662	0.37%
Subcontinent Asian American Females	2	0.01%	\$2,393	0.00%
Subcontinent Asian American Males	30	0.09%	\$25,187	0.04%
Hispanic American Females	108	0.32%	\$127,436	0.22%
Hispanic American Males	514	1.50%	\$1,330,613	2.31%
Native American Females	4	0.01%	\$10,437	0.02%
Native American Males	8	0.02%	\$9,572	0.02%
Caucasian Females	1,804	5.28%	\$3,359,036	5.84%
Non-minority Males	31,058	90.83%	\$51,221,508	89.00%
TOTAL	34,195	100.00%	\$57,552,545	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	1,333	3.90%	\$2,972,001	5.16%
Woman Business Enterprises	2,290	6.70%	\$3,985,986	6.93%



G. Informal Contracts by Industry, Valued \$10,001 to \$15,000

1. Construction Prime Contract Utilization: Contracts Valued \$10,001 to \$15,000

Table 3.21 summarizes all contract dollars expended by METRO on construction prime contracts valued \$10,001 to \$15,000. MBEs received 18.66% of the construction prime contract dollars; WBEs received 9.82%; and non-M/WBEs received 74.57%.

African Americans received 2, or 6.25%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$25,960, or 6.35%, of the construction prime contract dollars.

Asian-Pacific Americans received no construction prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Subcontinent Asian Americans received no construction prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Hispanic Americans received 4, or 12.50%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$50,350, or 12.31%, of the construction prime contract dollars.

Native Americans received no construction prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Caucasian Females received 2, or 6.25%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$27,646, or 6.76%, of the construction prime contract dollars.

Non-minority Males received 24, or 75.00%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$304,900, or 74.57%, of the construction prime contract dollars.

Minority Business Enterprises received 6, or 18.75%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$76,310, or 18.66%, of the construction prime contract dollars.

Woman Business Enterprises received 3, or 9.38%, of the construction prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$40,143, or 9.82%, of the construction prime contract dollars.



**Table 3.21: Construction Prime Contract Utilization:
Contracts Valued \$10,001 to \$15,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	2	6.25%	\$25,960	6.35%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	4	12.50%	\$50,350	12.31%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	2	6.25%	\$27,646	6.76%
Non-minority Males	24	75.00%	\$304,900	74.57%
TOTAL	32	100.00%	\$408,856	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	3.13%	\$12,497	3.06%
African American Males	1	3.13%	\$13,462	3.29%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	4	12.50%	\$50,350	12.31%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	2	6.25%	\$27,646	6.76%
Non-minority Males	24	75.00%	\$304,900	74.57%
TOTAL	32	100.00%	\$408,856	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	6	18.75%	\$76,310	18.66%
Woman Business Enterprises	3	9.38%	\$40,143	9.82%



2. Professional Services Prime Contract Utilization: Contracts Valued \$10,001 to \$15,000

Table 3.22 summarizes all contract dollars expended by METRO on professional services prime contracts valued \$10,001 to \$15,000. MBEs received 10.79% of the professional services prime contract dollars; WBEs received 14.34%; and non-M/WBEs received 85.66%.

African Americans received 4, or 5.26%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$47,698, or 5.21%, of the professional services prime contract dollars.

Asian-Pacific Americans received no professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Subcontinent Asian Americans received no professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Hispanic Americans received 4, or 5.26%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$51,161, or 5.59%, of the professional services prime contract dollars.

Native Americans received no professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Caucasian Females received 3, or 3.95%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$32,481, or 3.55%, of the professional services prime contract dollars.

Non-minority Males received 65, or 85.53%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$784,519, or 85.66%, of the professional services prime contract dollars.

Minority Business Enterprises received 8, or 10.53%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$98,858, or 10.79%, of the professional services prime contract dollars.

Woman Business Enterprises received 11, or 14.47%, of the professional services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$131,340, or 14.34%, of the professional services prime contract dollars.



**Table 3.22: Professional Services Prime Contract Utilization:
Contracts Valued \$10,001 to \$15,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	4	5.26%	\$47,698	5.21%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	4	5.26%	\$51,161	5.59%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	3	3.95%	\$32,481	3.55%
Non-minority Males	65	85.53%	\$784,519	85.66%
TOTAL	76	100.00%	\$915,858	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	4	5.26%	\$47,698	5.21%
African American Males	0	0.00%	\$0	0.00%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	4	5.26%	\$51,161	5.59%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	3	3.95%	\$32,481	3.55%
Non-minority Males	65	85.53%	\$784,519	85.66%
TOTAL	76	100.00%	\$915,858	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	8	10.53%	\$98,858	10.79%
Woman Business Enterprises	11	14.47%	\$131,340	14.34%



3. Goods and Services Prime Contract Utilization: Contracts Valued \$10,001 to \$15,000

Table 3.23 summarizes all contract dollars expended by METRO on goods and services prime contracts valued \$10,001 to \$15,000. MBEs received 7.33% of the goods and services prime contract dollars; WBEs received 5.50%; and non-M/WBEs received 88.37%.

African Americans received 29, or 2.43%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$368,448, or 2.52%, of the goods and services prime contract dollars.

Asian-Pacific Americans received 24, or 2.01%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$288,159, or 1.97%, of the goods and services prime contract dollars.

Subcontinent Asian Americans received 1, or 0.08%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$13,350, or 0.09%, of the goods and services prime contract dollars.

Hispanic Americans received 33, or 2.77%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$401,221, or 2.75%, of the goods and services prime contract dollars.

Native Americans received no goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period.

Caucasian Females received 52, or 4.36%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$626,737, or 4.29%, of the goods and services prime contract dollars.

Non-minority Males received 1,053, or 88.34%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$12,906,087, or 88.37%, of the goods and services prime contract dollars.

Minority Business Enterprises received 87, or 7.30%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$1,071,178, or 7.33%, of the goods and services prime contract dollars.

Woman Business Enterprises received 67, or 5.62%, of the goods and services prime contracts valued \$10,001 to \$15,000 awarded during the study period, representing \$803,792, or 5.50%, of the goods and services prime contract dollars.



**Table 3.23: Goods and Services Prime Contract Utilization:
Contracts Valued \$10,001 to \$15,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	29	2.43%	\$368,448	2.52%
Asian-Pacific Americans	24	2.01%	\$288,159	1.97%
Subcontinent Asian Americans	1	0.08%	\$13,350	0.09%
Hispanic Americans	33	2.77%	\$401,221	2.75%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	52	4.36%	\$626,737	4.29%
Non-minority Males	1,053	88.34%	\$12,906,087	88.37%
TOTAL	1,192	100.00%	\$14,604,002	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	4	0.34%	\$51,221	0.35%
African American Males	25	2.10%	\$317,227	2.17%
Asian-Pacific American Females	7	0.59%	\$77,622	0.53%
Asian-Pacific American Males	17	1.43%	\$210,536	1.44%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	1	0.08%	\$13,350	0.09%
Hispanic American Females	4	0.34%	\$48,210	0.33%
Hispanic American Males	29	2.43%	\$353,010	2.42%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	52	4.36%	\$626,737	4.29%
Non-minority Males	1,053	88.34%	\$12,906,087	88.37%
TOTAL	1,192	100.00%	\$14,604,002	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	87	7.30%	\$1,071,178	7.33%
Woman Business Enterprises	67	5.62%	\$803,792	5.50%



H. Informal Contracts by Industry, Valued \$15,001 to \$50,000

1. Construction Prime Contract Utilization: Contracts Valued \$15,001 to \$50,000

Table 3.24 summarizes all contract dollars expended by METRO on construction prime contracts valued \$15,001 to \$50,000. MBEs received 34.43% of the construction prime contract dollars; WBEs received 13.86%; and non-M/WBEs received 53.38%.

African Americans received 12, or 8.89%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$375,939, or 8.39%, of the construction prime contract dollars.

Asian-Pacific Americans received no construction prime contracts valued \$15,001 to \$50,000 awarded during the study period.

Subcontinent Asian Americans received 5, or 3.70%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$157,758, or 3.52%, of the construction prime contract dollars.

Hispanic Americans received 30, or 22.22%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$1,008,554, or 22.52%, of the construction prime contract dollars.

Native Americans received no construction prime contracts valued \$15,001 to \$50,000 awarded during the study period.

Caucasian Females received 16, or 11.85%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$545,713, or 12.18%, of the construction prime contract dollars.

Non-minority Males received 72, or 53.33%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$2,391,130, or 53.38%, of the construction prime contract dollars.

Minority Business Enterprises received 47, or 34.81%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$1,542,251, or 34.43%, of the construction prime contract dollars.

Woman Business Enterprises received 19, or 14.07%, of the construction prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$620,896, or 13.86%, of the construction prime contract dollars.



**Table 3.24: Construction Prime Contract Utilization:
Contracts Valued \$15,001 to \$50,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	12	8.89%	\$375,939	8.39%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	5	3.70%	\$157,758	3.52%
Hispanic Americans	30	22.22%	\$1,008,554	22.52%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	16	11.85%	\$545,713	12.18%
Non-minority Males	72	53.33%	\$2,391,130	53.38%
TOTAL	135	100.00%	\$4,479,094	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.74%	\$34,788	0.78%
African American Males	11	8.15%	\$341,151	7.62%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	1	0.74%	\$18,592	0.42%
Subcontinent Asian American Males	4	2.96%	\$139,166	3.11%
Hispanic American Females	1	0.74%	\$21,802	0.49%
Hispanic American Males	29	21.48%	\$986,752	22.03%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	16	11.85%	\$545,713	12.18%
Non-minority Males	72	53.33%	\$2,391,130	53.38%
TOTAL	135	100.00%	\$4,479,094	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	47	34.81%	\$1,542,251	34.43%
Woman Business Enterprises	19	14.07%	\$620,896	13.86%



2. Professional Services Prime Contract Utilization: Contracts Valued \$15,001 to \$50,000

Table 3.25 summarizes all contract dollars expended by METRO on professional services prime contracts valued \$15,001 to \$50,000. MBEs received 14.85% of the professional services prime contract dollars; WBEs received 15.59%; and non-M/WBEs received 76.78%.

African Americans received 6, or 2.63%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$166,579, or 2.52%, of the professional services prime contract dollars.

Asian-Pacific Americans received 9, or 3.95%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$329,543, or 4.99%, of the professional services prime contract dollars.

Subcontinent Asian Americans received no professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period.

Hispanic Americans received 18, or 7.89%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$483,789, or 7.33%, of the professional services prime contract dollars.

Native Americans received no professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period.

Caucasian Females received 21, or 9.21%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$552,151, or 8.37%, of the professional services prime contract dollars.

Non-minority Males received 174, or 76.32%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$5,065,715, or 76.78%, of the professional services prime contract dollars.

Minority Business Enterprises received 33, or 14.47%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$979,911, or 14.85%, of the professional services prime contract dollars.

Woman Business Enterprises received 36, or 15.79%, of the professional services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$1,028,675, or 15.59%, of the professional services prime contract dollars.



**Table 3.25: Professional Services Prime Contract Utilization:
Contracts Valued \$15,001 to \$50,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	6	2.63%	\$166,579	2.52%
Asian-Pacific Americans	9	3.95%	\$329,543	4.99%
Subcontinent Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	18	7.89%	\$483,789	7.33%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	21	9.21%	\$552,151	8.37%
Non-minority Males	174	76.32%	\$5,065,715	76.78%
TOTAL	228	100.00%	\$6,597,777	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	4	1.75%	\$117,479	1.78%
African American Males	2	0.88%	\$49,100	0.74%
Asian-Pacific American Females	7	3.07%	\$251,524	3.81%
Asian-Pacific American Males	2	0.88%	\$78,019	1.18%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	4	1.75%	\$107,520	1.63%
Hispanic American Males	14	6.14%	\$376,268	5.70%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	21	9.21%	\$552,151	8.37%
Non-minority Males	174	76.32%	\$5,065,715	76.78%
TOTAL	228	100.00%	\$6,597,777	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	33	14.47%	\$979,911	14.85%
Woman Business Enterprises	36	15.79%	\$1,028,675	15.59%



3. Goods and Services Prime Contract Utilization: Contracts Valued \$15,001 to \$50,000

Table 3.26 summarizes all contract dollars expended by METRO on goods and services prime contracts valued \$15,001 to \$50,000. MBEs received 12.31% of the goods and services prime contract dollars; WBEs received 6.78%; and non-M/WBEs received 82.93%.

African Americans received 57, or 3.46%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$1,622,573, or 3.97%, of the goods and services prime contract dollars.

Asian-Pacific Americans received 38, or 2.31%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$973,115, or 2.38%, of the goods and services prime contract dollars.

Subcontinent Asian Americans received 2, or 0.12%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$60,058, or 0.15%, of the goods and services prime contract dollars.

Hispanic Americans received 88, or 5.35%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$2,344,036, or 5.73%, of the goods and services prime contract dollars.

Native Americans received 2, or 0.12%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$36,092, or 0.09%, of the goods and services prime contract dollars.

Caucasian Females received 84, or 5.10%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$1,950,639, or 4.77%, of the goods and services prime contract dollars.

Non-minority Males received 1,375, or 83.54%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$33,930,862, or 82.93%, of the goods and services prime contract dollars.

Minority Business Enterprises received 187, or 11.36%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$5,035,874, or 12.31%, of the goods and services prime contract dollars.

Woman Business Enterprises received 112, or 6.80%, of the goods and services prime contracts valued \$15,001 to \$50,000 awarded during the study period, representing \$2,773,795, or 6.78%, of the goods and services prime contract dollars.



**Table 3.26: Goods and Services Prime Contract Utilization:
Contracts Valued \$15,001 to \$50,000, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	57	3.46%	\$1,622,573	3.97%
Asian-Pacific Americans	38	2.31%	\$973,115	2.38%
Subcontinent Asian Americans	2	0.12%	\$60,058	0.15%
Hispanic Americans	88	5.35%	\$2,344,036	5.73%
Native Americans	2	0.12%	\$36,092	0.09%
Caucasian Females	84	5.10%	\$1,950,639	4.77%
Non-minority Males	1,375	83.54%	\$33,930,862	82.93%
TOTAL	1,646	100.00%	\$40,917,375	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	7	0.43%	\$209,924	0.51%
African American Males	50	3.04%	\$1,412,649	3.45%
Asian-Pacific American Females	7	0.43%	\$191,794	0.47%
Asian-Pacific American Males	31	1.88%	\$781,321	1.91%
Subcontinent Asian American Females	1	0.06%	\$41,400	0.10%
Subcontinent Asian American Males	1	0.06%	\$18,658	0.05%
Hispanic American Females	11	0.67%	\$343,945	0.84%
Hispanic American Males	77	4.68%	\$2,000,091	4.89%
Native American Females	2	0.12%	\$36,092	0.09%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	84	5.10%	\$1,950,639	4.77%
Non-minority Males	1,375	83.54%	\$33,930,862	82.93%
TOTAL	1,646	100.00%	\$40,917,375	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	187	11.36%	\$5,035,874	12.31%
Woman Business Enterprises	112	6.80%	\$2,773,795	6.78%



I. Formal Prime Contracts by Industry

1. Construction Prime Contract Utilization: Contracts Valued over \$50,000 and under \$3,530,000

Table 3.27 summarizes all contract dollars expended by METRO on construction prime contracts valued over \$50,000 and under \$3,530,000. MBEs received 39.90% of the construction prime contract dollars; WBEs received 9.06%; and non-M/WBEs received 56.95%.

African Americans received 10, or 16.95%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$8,982,932, or 19.46%, of the construction prime contract dollars.

Asian-Pacific Americans received no construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period.

Subcontinent Asian Americans received 2, or 3.39%, of the goods and services prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$2,281,041, or 4.94%, of the construction prime contract dollars.

Hispanic Americans received 10, or 16.95%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$7,151,530, or 15.50%, of the construction prime contract dollars.

Native Americans received no construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period.

Caucasian Females received 2, or 3.39%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$1,450,594, or 3.14%, of the construction prime contract dollars.

Non-minority Males received 35, or 59.32%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$26,284,630, or 56.95%, of the construction prime contract dollars.

Minority Business Enterprises received 22, or 37.29%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$18,415,503, or 39.90%, of the construction prime contract dollars.

Woman Business Enterprises received 7, or 11.86%, of the construction prime contracts valued over \$50,000 and under \$3,530,000 awarded during the study period, representing \$4,180,187, or 9.06%, of the construction prime contract dollars.



**Table 3.27: Construction Prime Contract Utilization:
Contracts Valued over \$50,000 and under \$3,530,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	10	16.95%	\$8,982,932	19.46%
Asian-Pacific Americans	0	0.00%	\$0	0.00%
Subcontinent Asian Americans	2	3.39%	\$2,281,041	4.94%
Hispanic Americans	10	16.95%	\$7,151,530	15.50%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	2	3.39%	\$1,450,594	3.14%
Non-minority Males	35	59.32%	\$26,284,630	56.95%
TOTAL	59	100.00%	\$46,150,727	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	3.39%	\$2,104,671	4.56%
African American Males	8	13.56%	\$6,878,261	14.90%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	0	0.00%	\$0	0.00%
Subcontinent Asian American Females	1	1.69%	\$356,326	0.77%
Subcontinent Asian American Males	1	1.69%	\$1,924,716	4.17%
Hispanic American Females	2	3.39%	\$268,596	0.58%
Hispanic American Males	8	13.56%	\$6,882,933	14.91%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	2	3.39%	\$1,450,594	3.14%
Non-minority Males	35	59.32%	\$26,284,630	56.95%
TOTAL	59	100.00%	\$46,150,727	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	22	37.29%	\$18,415,503	39.90%
Woman Business Enterprises	7	11.86%	\$4,180,187	9.06%



2. Professional Services Prime Contract Utilization: Contracts Valued over \$50,000 and under \$1,560,000

Table 3.28 summarizes all contract dollars expended by METRO on professional services prime contracts valued over \$50,000 and under \$1,560,000. MBEs received 23.98% of the professional services prime contract dollars; WBEs received 21.48%; and non-M/WBEs received 68.36%.

African Americans received 3, or 2.52%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$495,922, or 1.36%, of the professional services prime contract dollars.

Asian-Pacific Americans received 2, or 1.68%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$504,873, or 1.39%, of the professional services prime contract dollars.

Subcontinent Asian Americans received 4, or 3.36%, of the goods and services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$1,545,247, or 4.24%, of the goods and services prime contract dollars.

Hispanic Americans received 14, or 11.76%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$6,188,013, or 16.99%, of the professional services prime contract dollars.

Native Americans received no professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period.

Caucasian Females received 6, or 5.04%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$2,788,319, or 7.66%, of the professional services prime contract dollars.

Non-minority Males received 90, or 75.63%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$24,893,843, or 68.36%, of the professional services prime contract dollars.

Minority Business Enterprises received 23, or 19.33%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$8,734,054, or 23.98%, of the professional services prime contract dollars.

Woman Business Enterprises received 15, or 12.61%, of the professional services prime contracts valued over \$50,000 and under \$1,560,000 awarded during the study period, representing \$7,821,927, or 21.48%, of the professional services prime contract dollars.



**Table 3.28: Professional Services Prime Contract Utilization:
Contracts Valued over \$50,000 and under \$1,560,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	3	2.52%	\$495,922	1.36%
Asian-Pacific Americans	2	1.68%	\$504,873	1.39%
Subcontinent Asian Americans	4	3.36%	\$1,545,247	4.24%
Hispanic Americans	14	11.76%	\$6,188,013	16.99%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	6	5.04%	\$2,788,319	7.66%
Non-minority Males	90	75.63%	\$24,893,843	68.36%
TOTAL	119	100.00%	\$36,416,216	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	3	2.52%	\$495,922	1.36%
Asian-Pacific American Females	1	0.84%	\$273,909	0.75%
Asian-Pacific American Males	1	0.84%	\$230,964	0.63%
Subcontinent Asian American Females	0	0.00%	\$0	0.00%
Subcontinent Asian American Males	4	3.36%	\$1,545,247	4.24%
Hispanic American Females	8	6.72%	\$4,759,699	13.07%
Hispanic American Males	6	5.04%	\$1,428,314	3.92%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	6	5.04%	\$2,788,319	7.66%
Non-minority Males	90	75.63%	\$24,893,843	68.36%
TOTAL	119	100.00%	\$36,416,216	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	23	19.33%	\$8,734,054	23.98%
Woman Business Enterprises	15	12.61%	\$7,821,927	21.48%



3. Goods and Services Prime Contract Utilization: Contracts Valued over \$50,000 and under \$670,000

Table 3.29 summarizes all contract dollars expended by METRO on goods and services prime contracts valued over \$50,000 and under \$670,000. MBEs received 25.33% of the goods and services prime contract dollars; WBEs received 18.28%; and non-M/WBEs received 69.42%.

African Americans received 17, or 5.54%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$4,120,204, or 7.99%, of the goods and services prime contract dollars.

Asian-Pacific Americans received 15, or 4.89%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$2,106,799, or 4.09%, of the goods and services prime contract dollars.

Subcontinent Asian Americans received 1, or 0.33%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$132,119, or 0.26%, of the goods and services prime contract dollars.

Hispanic Americans received 32, or 10.42%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$6,604,357, or 12.81%, of the goods and services prime contract dollars.

Native Americans received 1, or 0.33%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$95,857, or 0.19%, of the goods and services prime contract dollars.

Caucasian Females received 13, or 4.23%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$2,706,761, or 5.25%, of the goods and services prime contract dollars.

Non-minority Males received 228, or 74.27%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$35,791,906, or 69.42%, of the goods and services prime contract dollars.

Minority Business Enterprises received 66, or 21.50%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$13,059,337, or 25.33%, of the goods and services prime contract dollars.

Woman Business Enterprises received 49, or 15.96%, of the goods and services prime contracts valued over \$50,000 and under \$670,000 awarded during the study period, representing \$9,426,413, or 18.28%, of the goods and services prime contract dollars.



**Table 3.29: Goods and Services Prime Contract Utilization:
Contracts Valued over \$50,000 and under \$670,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	17	5.54%	\$4,120,204	7.99%
Asian-Pacific Americans	15	4.89%	\$2,106,799	4.09%
Subcontinent Asian Americans	1	0.33%	\$132,119	0.26%
Hispanic Americans	32	10.42%	\$6,604,357	12.81%
Native Americans	1	0.33%	\$95,857	0.19%
Caucasian Females	13	4.23%	\$2,706,761	5.25%
Non-minority Males	228	74.27%	\$35,791,906	69.42%
TOTAL	307	100.00%	\$51,558,004	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	3	0.98%	\$843,477	1.64%
African American Males	14	4.56%	\$3,276,727	6.36%
Asian-Pacific American Females	13	4.23%	\$1,684,680	3.27%
Asian-Pacific American Males	2	0.65%	\$422,119	0.82%
Subcontinent Asian American Females	1	0.33%	\$132,119	0.26%
Subcontinent Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	18	5.86%	\$3,963,519	7.69%
Hispanic American Males	14	4.56%	\$2,640,838	5.12%
Native American Females	1	0.33%	\$95,857	0.19%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	13	4.23%	\$2,706,761	5.25%
Non-minority Males	228	74.27%	\$35,791,906	69.42%
TOTAL	307	100.00%	\$51,558,004	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	66	21.50%	\$13,059,337	25.33%
Woman Business Enterprises	49	15.96%	\$9,426,413	18.28%



V. Summary

The prime contractor utilization analysis examined \$598,483,022 prime contracts awarded by METRO during the October 1, 2013 to September 30, 2018 study period. The \$598,483,022 expended included \$119,534,468 for construction, \$166,185,086 for professional services, and \$312,763,467 for goods and services. A total of 38,818 prime contracts were analyzed, which included 582 for construction, 852 for professional services, and 37,384 for goods and services.

The utilization analysis was performed for prime contracts in the three industries at three-dollar thresholds: 1) all prime contracts regardless of award amount; 2) all informal prime contracts valued \$10,000 and under, \$10,001 to \$15,000, and \$15,001 to \$50,000 for construction, professional services, and goods and services, as defined by the Procurement Manual; 3) formal prime contracts with thresholds set for each industry to eliminate outliers. Given the application of the thresholds, the formal prime contracts analyzed were valued over \$50,000 and under \$3,530,000 for construction, over \$50,000 and under \$1,560,000 for professional services, and over \$50,000 and under \$670,000 for goods and services. *Chapter 7: Prime Contract Disparity Analysis* presents the statistical analysis of disparity in each of the three industries.



CHAPTER 4: Subcontractor Utilization Analysis

I. Introduction

A disparity study, as required by *Croson*, must document the local government's utilization of available Minority and Woman-owned Business Enterprises (M/WBEs) and non-minority male business enterprises as prime contractors and subcontractors. The objective of this chapter is to present the utilization by ethnicity, gender, and industry of M/WBEs and non-minority male business enterprises as construction and professional services subcontractors. The analysis examined the subcontracts awarded by the Metropolitan Transit Authority of Harris County's (METRO's) prime contractors during the October 1, 2013, to September 30, 2018, study period.

II. Data Sources

METRO uses a comprehensive Small Business Enterprise Compliance system to track the participation of certified small businesses (SBE) on all prime contracts. SBE awards and payments tracked in the system are each linked to a unique contract number. Some non-SBEs are also tracked in the Small Business Enterprise system. Therefore, additional research was undertaken, in conjunction with METRO, in an effort to reconstruct the non-SBE subcontracts on construction and professional service (including architecture and engineering) prime contracts during the study period.

A. Data Reconstruction Process

Three methods were used to reconstruct the non-SBE subcontract data. Construction and professional services (including architecture and engineering) prime contractors were surveyed to collect their subcontractors. Subcontractors identified through the survey were also contacted to verify their utilization. METRO's managers reviewed some of the large prime contracts for their subcontract data.

1. Prime Contractor Expenditure Survey

A letter was mailed to prime contractors listing the prime contracts awarded to their business during the study period. The prime contractor was asked to provide the name, award, and payment amount for each subcontractor, trucker, supplier and subconsultant, who worked on each contract. To maximize the response rate, a letter from METRO's President and Chief Executive Officer requesting the prime contractor's cooperation, accompanied each survey; and Mason Tillman in conjunction with METRO also made follow-up calls and sent emails to each prime contractor.



2. Subcontractor Expenditure Survey

Subcontractors were also surveyed to confirm the payment data collected from the prime contractors. The subcontractors were asked to verify the award and payment amount for each subcontract a prime contractor reported for the study period.

III. Subcontractor Utilization

A. All Subcontracts

As shown in Table 4.1, a total of 384 subcontracts were analyzed. These subcontracts included the 180 construction and 204 professional services reported in the Small Business Enterprise Compliance system and the unique subcontractors collected from the expenditure survey.

A total of \$26,396,523 subcontract dollars was analyzed during the October 1, 2013, to September 30, 2018, study period. This amount included \$15,300,362 for construction and \$11,096,161 for professional services subcontracts.

**Table 4.1: Subcontracts Awarded and Dollars Expended by Industry,
October 1, 2013, to September 30, 2018**

Industry	Total Number of Subcontracts	Total Amount Expended
Construction	180	\$15,300,362
Professional Services	204	\$11,096,161
Total	384	\$26,396,523



B. Subcontracts by Industry

1. Construction Subcontracts

Table 4.2 shows the identified construction subcontracts awarded by METRO's prime contractors. Minority-owned businesses (MBEs) received 33.51%; woman-owned businesses (WBEs) received 13.77%; and non-minority males received 53.37% of the construction subcontract dollars.

African Americans received 11, or 6.11%, of METRO's construction subcontracts during the study period, representing \$769,882, or 5.03%, of the construction subcontract dollars.

Asian-Pacific Americans received 2, or 1.11%, of METRO's construction subcontracts during the study period, representing \$60,464, or 0.40%, of the construction subcontract dollars.

Subcontinent Asian Americans received 3, or 1.67% of METRO's construction subcontracts during the study period, representing \$209,763, or 1.37% of the construction subcontract dollars.

Hispanic Americans received 25, or 13.89%, of METRO's construction subcontracts during the study period, representing \$4,086,302, or 26.71%, of the construction subcontract dollars.

Native Americans received no construction subcontracts during the study period.

Caucasian Females received 21, or 11.67%, of METRO's construction subcontracts during the study period, representing \$1,396,043, or 9.12%, of the construction subcontract dollars.

Non-minority Males received 118, or 65.56%, of METRO's construction subcontracts during the study period, representing \$8,777,908, or 57.37%, of the construction subcontract dollars.

Minority Business Enterprises received 41, or 22.78%, of METRO's construction subcontracts during the study period, representing \$5,126,411, or 33.51%, of the construction subcontract dollars.

Woman Business Enterprises received 31, or 17.22%, of METRO's construction subcontracts during the study period, representing \$2,107,025, or 13.77%, of the construction subcontract dollars.



**Table 4.2: Construction Subcontractor Utilization,
October 1, 2013, to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American	11	6.11%	\$769,882	5.03%
Asian-Pacific American	2	1.11%	\$60,464	0.40%
Subcontinent Asian American	3	1.67%	\$209,763	1.37%
Hispanic American	25	13.89%	\$4,086,302	26.71%
Native American	0	0.00%	\$0	0.00%
Caucasian Females	21	11.67%	\$1,396,043	9.12%
Non-minority Males	118	65.56%	\$8,777,908	57.37%
TOTAL	180	100.00%	\$15,300,362	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	7	3.89%	\$620,588	4.06%
African American Males	4	2.22%	\$149,294	0.98%
Asian-Pacific American Females	1	0.56%	\$59,324	0.39%
Asian-Pacific American Males	1	0.56%	\$1,140	0.01%
Subcontinent Asian American Females	1	0.56%	\$28,313	0.19%
Subcontinent Asian American Males	2	1.11%	\$181,450	1.19%
Hispanic American Females	1	0.56%	\$2,757	0.02%
Hispanic American Males	24	13.33%	\$4,083,544	26.69%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	21	11.67%	\$1,396,043	9.12%
Non-minority Males	118	65.56%	\$8,777,908	57.37%
TOTAL	180	100.00%	\$15,300,362	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	41	22.78%	\$5,126,411	33.51%
Woman Business Enterprises	31	17.22%	\$2,107,025	13.77%



2. Professional Services Subcontracts

Table 4.3 shows the professional services subcontracts issued by METRO's prime contractors. MBEs received 29.12%; WBEs received 13.93%; and non-minority males received 67.32% of the professional services subcontract dollars.

African Americans received 21, or 10.29%, of METRO's professional services subcontracts during the study period, representing \$529,954, or 4.78%, of the professional services subcontract dollars.

Asian-Pacific Americans received 9, or 4.41%, of METRO's professional services subcontracts during the study period, representing \$502,177, or 4.53%, of the professional services subcontract dollars.

Subcontinent Asian Americans received 11, or 5.39%, of METRO's professional services subcontracts during the study period, representing \$1,232,914, or 11.11%, of the professional services subcontract dollars.

Hispanic Americans received 21, or 10.29%, of METRO's professional services subcontracts during the study period, representing \$899,530, or 8.11%, of the professional services subcontract dollars.

Native Americans received 2, or 0.98%, of METRO's professional services subcontracts during the study period, representing \$67,099, or 0.60% of the professional services subcontract dollars.

Caucasian Females received 18, or 8.82%, of METRO's professional services subcontracts during the study period, representing \$394,025, or 3.55%, of the professional services subcontract dollars.

Non-minority Males received 122, or 59.80%, of METRO's professional services subcontracts during the study period, representing \$7,470,462, or 67.32%, of the professional services subcontract dollars.

Minority Business Enterprises received 64, or 31.37%, of METRO's professional services subcontracts during the study period, representing \$3,321,674, or 29.12%, of the professional services subcontract dollars.

Woman Business Enterprises received 29, or 14.22%, of METRO's professional services subcontracts during the study period, representing \$1,546,175, or 13.93%, of the professional services subcontract dollars.



**Table 4.3: Professional Services Subcontractor Utilization,
October 1, 2013, to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American	21	10.29%	\$529,954	4.78%
Asian-Pacific American	9	4.41%	\$502,177	4.53%
Subcontinent Asian American	11	5.39%	\$1,232,914	11.11%
Hispanic American	21	10.29%	\$899,530	8.11%
Native American	2	0.98%	\$67,099	0.60%
Caucasian Females	18	8.82%	\$394,025	3.55%
Non-minority Males	122	59.80%	\$7,470,462	67.32%
TOTAL	204	100.00%	\$11,096,161	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	4	1.96%	\$106,645	0.96%
African American Males	17	8.33%	\$423,309	3.81%
Asian-Pacific American Females	0	0.00%	\$0	0.00%
Asian-Pacific American Males	9	4.41%	\$502,177	4.53%
Subcontinent Asian American Females	1	0.49%	\$777,000	7.00%
Subcontinent Asian American Males	10	4.90%	\$455,914	4.11%
Hispanic American Females	6	2.94%	\$268,505	2.42%
Hispanic American Males	15	7.35%	\$631,025	5.69%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	2	0.98%	\$67,099	0.60%
Caucasian Females	18	8.82%	\$394,025	3.55%
Non-minority Males	122	59.80%	\$7,470,462	67.32%
TOTAL	204	100.00%	\$11,096,161	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	64	31.37%	\$3,231,674	29.12%
Woman Business Enterprises	29	14.22%	\$1,546,175	13.93%



IV. Conclusion

The subcontract data analyzed were compiled from the Small Business Enterprise Compliance system and a business survey. A total of 384 subcontracts were analyzed, which included 180 for construction and 204 for professional services. These 384 subcontracts were awarded by METRO's prime contractors during the October 1, 2013, to September 30, 2018 study period and totaled \$26,396,523. The total amount expended included \$15,300,362 for construction and \$11,096,161 for professional services subcontracts.



CHAPTER 5: Market Area Analysis

I. Market Area Definition

A. Legal Criteria for Geographic Market Area

The Supreme Court’s decision in *City of Richmond v. J.A. Croson Co.*²²⁹ (*Croson*) held that programs established by local governments to set goals for the participation of Minority-owned Business Enterprises (MBEs) 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.²³⁰

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.²³¹ 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 in saying 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 was investigated, the Court interchangeably used the terms “relevant market,” “Richmond construction industry,”²³² and “city’s construction industry.”²³³ These terms were used to define the proper scope for examining the existence of discrimination within the City. This interchangeable use of terms supports a definition of market area that coincides with the boundaries of a contracting jurisdiction.

²²⁹ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

²³⁰ *United Steelworkers v. Weber*, 433 U.S. 193, 198, n. 1 (1979).

²³¹ *Croson*, 488 U.S. at 497.

²³² *Id.* at 500.

²³³ *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.²³⁴ In *Cone Corporation v. Hillsborough County*,²³⁵ the United States Eleventh Circuit Court of Appeals 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 businesses. The program was found to be 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 award of construction contracts 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.”²³⁶

Similarly, in *Associated General Contractors v. Coalition for Economic Equity (AGCCII)*,²³⁷ the United States Ninth Circuit Court of Appeals 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 the City and County of San Francisco, California. The Court found it appropriate to use the City and County as the relevant market area within which to conduct a disparity study.²³⁸

In *Coral Construction v. King County*, the United States Ninth Circuit Court of Appeals held that “a set-aside program is valid only if actual, identifiable discrimination has occurred within the local industry affected by the program.”²³⁹ 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 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 within King County and from coterminous jurisdictions

²³⁴ See e.g., *Concrete Works of Colorado v. City of Denver, Colorado*, 36 F.3d 1513, 1528 (10th Cir. 1994) (“*Concrete Works*”).

²³⁵ *Cone Corporation v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990).

²³⁶ *Cone*, 908 F.2d at 915.

²³⁷ *Associated General Contractors of California v. Coalition for Economic Equity and City and County of San Francisco*, 950 F.2d 1401 (9th Cir. 1991).

²³⁸ *AGCCII*, 950 F.2d at 1415.

²³⁹ *Coral Construction Co. v. King County*, 941 F.2d 910 (9th Cir. 1991).



were relevant to discrimination in the County. The Court 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."²⁴⁰ However, the Court did note that the "world of contracting does not conform itself neatly to jurisdictional boundaries."²⁴¹

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*),²⁴² the United States Tenth Circuit Court of Appeals directly addressed the issue of whether 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 of Appeals disagreed.

Critical to the Court's acceptance of the Denver MSA as the relevant local market was the finding that more than 80 percent 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 was 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*,²⁴³ 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."²⁴⁴

State and local governments must pay special attention to the geographical scope of their disparity studies. *Croson* determined that the statistical analysis should focus on the number of qualified minority business owners in the government's marketplace.²⁴⁵ The text of *Croson* itself suggests that the geographical boundaries of the government entity comprise an appropriate market area, and other courts have agreed with this finding.

²⁴⁰ *Coral Construction Co. v. King County*, 941 F.2d at 917.

²⁴¹ *Id.*

²⁴² *Concrete Works*, 36 F.3d at 1528.

²⁴³ *AGCC II*, 950 F.2d at 1401.

²⁴⁴ *Concrete Works*, 36 F.3d at 1528.

²⁴⁵ *Croson*, 488 U.S. at 501.



It follows, then, that an entity may limit consideration of evidence of discrimination to discrimination occurring within its own jurisdiction.

II. Market Area Analysis

Although *Croson* and its progeny do not provide a bright-line rule for the delineation of the local market area, the case law, taken collectively, supports a definition of the market area as the geographical boundaries of the government entity. The market area analysis determined that the Metropolitan Transit Authority of Harris County (METRO) spent 64.1 percent of its dollars to businesses domiciled in Harris County. Thus, the Study's market area is determined to be the geographical boundaries of Harris County.

A. Summary of the Distribution of All Prime Contracts Awarded

METRO awarded 38,818 prime contracts, valued at \$598,483,022 during the October 1, 2013 to September 30, 2018, study period. The distribution of all prime contracts awarded and dollars received by all firms domiciled inside and outside of the market area is shown below in Table 5.1.



Table 5.1: Distribution of All Contracts Awarded

Texas Counties	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Harris	20,349	52.42%	\$383,632,478	64.10%
Dallas	894	2.30%	\$27,906,788	4.66%
Fort Bend	144	0.37%	\$12,265,920	2.05%
Travis	141	0.36%	\$11,815,278	1.97%
Bexar	103	0.27%	\$11,555,033	1.93%
Williamson	76	0.20%	\$3,012,860	0.50%
Montgomery	90	0.23%	\$1,277,817	0.21%
Tarrant	164	0.42%	\$1,255,273	0.21%
Lubbock	37	0.10%	\$950,594	0.16%
Collin	122	0.31%	\$937,912	0.16%
Denton	110	0.28%	\$782,104	0.13%
Galveston	450	1.16%	\$660,106	0.11%
Rockwall	20	0.05%	\$625,038	0.10%
Brazoria	28	0.07%	\$417,824	0.07%
El Paso	9	0.02%	\$267,660	0.04%
Hays	10	0.03%	\$185,173	0.03%
Victoria	17	0.04%	\$112,469	0.02%
Llano	1	0.00%	\$85,097	0.01%
Bell	12	0.03%	\$42,215	0.01%
Kendall	3	0.01%	\$36,543	0.01%
Tom Green	1	0.00%	\$32,000	0.01%
Liberty	2	0.01%	\$29,264	0.00%
Burnet	1	0.00%	\$20,984	0.00%
Smith	12	0.03%	\$20,342	0.00%
Johnson	5	0.01%	\$19,919	0.00%
Washington	2	0.01%	\$16,087	0.00%
Walker	12	0.03%	\$14,168	0.00%
Ector	3	0.01%	\$12,967	0.00%
Comal	1	0.00%	\$8,000	0.00%
Guadalupe	1	0.00%	\$7,245	0.00%
McLennan	1	0.00%	\$5,602	0.00%
Brazos	1	0.00%	\$5,082	0.00%
Midland	1	0.00%	\$4,306	0.00%
Wharton	1	0.00%	\$1,736	0.00%
Gregg	2	0.01%	\$1,414	0.00%
Bastrop	1	0.00%	\$1,152	0.00%
Wilson	1	0.00%	\$600	0.00%
Out of State	15,800	40.70%	\$139,502,336	23.31%
Out of Country	190	0.49%	\$955,637	0.16%
Total	38,818	100.00%	\$598,483,022	100.00%



B. Distribution of Construction Prime Contracts

METRO awarded 582 construction prime contracts, valued at \$119,534,468 during the study period. Businesses located in the market area received 95.36 percent of the construction prime contracts and 89.10 percent of the dollars. The distribution of the construction prime contracts awarded and dollars received by all firms domiciled inside and outside of the market area is shown below in Table 5.2.

Table 5.2: Distribution of Construction Prime Contracts

Texas Counties	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Harris	555	95.36%	\$106,501,593	89.10%
Fort Bend	3	0.52%	\$8,626,724	7.22%
Dallas	5	0.86%	\$2,935,559	2.46%
Montgomery	1	0.17%	\$833,801	0.70%
Tarrant	1	0.17%	\$49,731	0.04%
Galveston	5	0.86%	\$38,639	0.03%
Victoria	3	0.52%	\$36,520	0.03%
Collin	1	0.17%	\$12,195	0.01%
Brazoria	2	0.34%	\$11,094	0.01%
Out of State	6	1.03%	\$488,613	0.41%
Total	582	100.00%	\$119,534,468	100.00%

C. Distribution of Professional Services Prime Contracts

METRO awarded 852 professional services (including architecture and engineering) prime contracts, valued at \$166,185,086 during the study period. Businesses located in the market area received 38.26 percent of the professional services prime contracts and 83.32 percent of the dollars. The distribution of the professional services prime contracts awarded and dollars received by all firms domiciled inside and outside of the market area is shown below in Table 5.3.



Table 5.3: Distribution of Professional Services Prime Contracts

Texas Counties	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Harris	326	38.26%	\$138,458,383	83.32%
Dallas	85	9.98%	\$10,308,514	6.20%
Bexar	29	3.40%	\$1,601,624	0.96%
Fort Bend	18	2.11%	\$800,663	0.48%
Travis	48	5.63%	\$761,517	0.46%
Collin	4	0.47%	\$400,509	0.24%
Montgomery	10	1.17%	\$285,384	0.17%
Tarrant	9	1.06%	\$179,205	0.11%
Brazoria	3	0.35%	\$97,050	0.06%
Denton	4	0.47%	\$86,546	0.05%
Hays	1	0.12%	\$37,295	0.02%
Kendall	2	0.23%	\$35,440	0.02%
Rockwall	9	1.06%	\$18,439	0.01%
Guadalupe	1	0.12%	\$7,245	0.00%
Galveston	1	0.12%	\$5,100	0.00%
Wilson	1	0.12%	\$600	0.00%
Out of State	297	34.86%	\$13,073,033	7.87%
Out of Country	4	0.47%	\$28,540	0.02%
Total	852	100.00%	\$166,185,086	100.00%

D. Distribution of Goods and Services Prime Contracts

METRO awarded 37,384 goods and services prime contracts, valued at \$312,763,467 during the study period. Businesses located in the market area received 52.08 percent of the goods and services prime contracts and 44.34 percent of the dollars. The distribution of the goods and services prime contracts awarded and dollars received by all firms domiciled inside and outside of the market area is shown below in Table 5.4.



Table 5.4: Distribution of Goods and Services Prime Contracts

Texas Counties	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Harris	19,468	52.08%	\$138,672,503	44.34%
Dallas	804	2.15%	\$14,662,714	4.69%
Travis	93	0.25%	\$11,053,760	3.53%
Bexar	74	0.20%	\$9,953,409	3.18%
Williamson	76	0.20%	\$3,012,860	0.96%
Fort Bend	123	0.33%	\$2,838,533	0.91%
Tarrant	154	0.41%	\$1,026,337	0.33%
Lubbock	37	0.10%	\$950,594	0.30%
Denton	106	0.28%	\$695,558	0.22%
Galveston	444	1.19%	\$616,368	0.20%
Rockwall	11	0.03%	\$606,599	0.19%
Collin	117	0.31%	\$525,207	0.17%
Brazoria	23	0.06%	\$309,680	0.10%
El Paso	9	0.02%	\$267,660	0.09%
Montgomery	79	0.21%	\$158,633	0.05%
Hays	9	0.02%	\$147,878	0.05%
Llano	1	0.00%	\$85,097	0.03%
Victoria	14	0.04%	\$75,949	0.02%
Bell	12	0.03%	\$42,215	0.01%
Tom Green	1	0.00%	\$32,000	0.01%
Liberty	2	0.01%	\$29,264	0.01%
Burnet	1	0.00%	\$20,984	0.01%
Smith	12	0.03%	\$20,342	0.01%
Johnson	5	0.01%	\$19,919	0.01%
Washington	2	0.01%	\$16,087	0.01%
Walker	12	0.03%	\$14,168	0.00%
Ector	3	0.01%	\$12,967	0.00%
Comal	1	0.00%	\$8,000	0.00%
McLennan	1	0.00%	\$5,602	0.00%
Brazos	1	0.00%	\$5,082	0.00%
Midland	1	0.00%	\$4,306	0.00%
Wharton	1	0.00%	\$1,736	0.00%
Gregg	2	0.01%	\$1,414	0.00%
Bastrop	1	0.00%	\$1,152	0.00%
Kendall	1	0.00%	\$1,103	0.00%
Out of State	15,497	41.45%	\$125,940,691	40.27%
Out of Country	186	0.50%	\$927,097	0.30%
Total	37,384	100.00%	\$312,763,467	100.00%



III. Summary

During the study period, METRO awarded 38,818 construction, professional services, and goods and services prime contracts, valued at \$598,483,022. METRO awarded 52.42 percent of prime contracts and 64.10 percent of dollars to businesses domiciled within the market area.

Table 5.5 below presents an overview of the number of construction, professional services, and goods and services prime contracts METRO awarded, and the dollars spent, in the market area.

Construction Prime Contracts: 555, or 95.36%, of construction prime contracts were awarded to market area businesses. Construction prime contracts in the market area accounted for \$106,501,593, or 89.10%, of the total construction prime contract dollars.

Professional Services Prime Contracts: 326, or 38.26%, of professional services prime contracts were awarded to market area businesses. Professional services prime contracts in the market area accounted for \$138,458,383, or 83.32%, of the total professional services prime contract dollars.

Goods and Services Prime Contracts: 19,468, or 52.08%, of goods and services prime contracts were awarded to market area businesses. Goods and services prime contracts in the market area accounted for \$138,672,503, or 44.34%, of the total goods and services prime contract dollars.

Table 5.5: METRO Contract Distribution

Geographic Area	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Combined Industries				
Market Area	20,349	52.42%	\$383,632,478	64.10%
Outside Market Area	18,469	47.58%	\$214,850,543	35.90%
TOTAL	38,818	100.00%	\$598,483,022	100.00%
Construction				
Market Area	555	95.36%	\$106,501,593	89.10%
Outside Market Area	27	4.64%	\$13,032,876	10.90%
TOTAL	582	100.00%	\$119,534,468	100.00%
Professional Services (Including Architecture and Engineering)				
Market Area	326	38.26%	\$138,458,383	83.32%
Outside Market Area	526	61.74%	\$27,726,704	16.68%
TOTAL	852	100.00%	\$166,185,086	100.00%
Goods and Services				
Market Area	19,468	52.08%	\$138,672,503	44.34%
Outside Market Area	17,916	47.92%	\$174,090,964	55.66%
TOTAL	37,384	100.00%	\$312,763,467	100.00%



CHAPTER 6: Prime Contractor and Subcontractor Availability Analysis

I. Introduction

According to *City of Richmond v. J.A. Croson Co.* (*Croson*), availability is defined as the number of businesses in the jurisdiction’s market area that are ready, willing, and able to provide the goods or services procured by the jurisdiction.²⁴⁶ To determine the availability of Minority and Woman-owned Business Enterprises²⁴⁷ (M/WBEs) and non-minority male-owned businesses within the jurisdiction’s market area, businesses domiciled within the market area need to be enumerated. As defined in *Chapter 5: Market Area Analysis*, the market area is Harris County.

When considering sources to determine the number of available M/WBEs and non-M/WBEs in the market area, the selection must be based on whether two aspects about the population in question can be gauged from the sources. One consideration is a business’ interest in contracting with the jurisdiction, as implied by the term “willing.” The other is the business’ ability or capacity to provide a service or good, as implied by the term “able.” The enumeration of available businesses met these criteria.

II. Prime Contractor Availability Data Sources

A. Identification of Willing Businesses within the Market Area

To identify willing and able businesses in Harris County that provide the construction, professional services, and goods and services that the Metropolitan Transit Authority of Harris County (METRO) procures, four main sources of information were used. The first source was METRO’s records, including utilized businesses and vendor lists. The second source was government certification directories. The third source was comprised of business owner attendees at the METRO Disparity Study business community meetings. Business association membership lists were the fourth source. Only businesses on the membership lists that were determined to be willing, ready, and able were added to the availability list. Any business listed in more than one source was only counted once in the relevant industry. If a business was willing and able to provide goods or services in more than one industry, it was listed separately in each industry.

The four sources were ranked according to their reliability in determining a business’ willingness to contract with METRO, with the highest ranking assigned to the utilized businesses and vendor lists. Government certification lists ranked second; community meeting attendees ranked third; and business association membership lists ranked fourth. As a result, the first data source used to



²⁴⁶ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

²⁴⁷ Hereinafter referred to as Minority and Caucasian female-owned businesses in the statistical tables.

build the availability database was METRO's utilized businesses. Vendor lists were then appended to the availability database. Businesses identified from federal and local government certification agencies were thereafter appended. The local certification lists included small, minority, and woman-owned businesses. The presence of a business at a business community meeting was an affirmation of the business' willingness to contract with METRO; therefore, the registration list was appended to the availability list. Businesses identified from association membership lists that also 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.

B. Prime Contractor Sources

Extensive targeted outreach to business associations in the market area was performed to identify and secure business membership directories. Table 6.1 lists the availability sources, including METRO records, certification directories, and business association listings.

Table 6.1: Prime Contractor Availability Data Sources

Source	Type of Information
Metropolitan Transit Authority of Harris County, Texas Records	
Awards with CloseStatus FY14-18 Disparity Study, CONTRACTS FY14 - FY16	M/WBE and Non-minority Male
Awards with CloseStatus FY14-18 Disparity Study, POs FY14 - FY16	M/WBE and Non-minority Male
Awards with CloseStatus FY14-18 Disparity Study, SAP CONTRACTS FY17 - FY18	M/WBE and Non-minority Male
Awards with CloseStatus FY14-18 Disparity Study, SAP POs FY7 - FY18	M/WBE and Non-minority Male
Copy of rpt - Oracle POInvoicePayment FY14-16 Disparity Study, FY14	M/WBE and Non-minority Male
Copy of rpt - Oracle POInvoicePayment FY14-16 Disparity Study, FY15	M/WBE and Non-minority Male
Copy of rpt - Oracle POInvoicePayment FY14-16 Disparity Study, FY16	M/WBE and Non-minority Male
FY14 ORACLE CONTRACTS	M/WBE and Non-minority Male
FY14 ORACLE PURCHASE ORDERS	M/WBE and Non-minority Male
FY14 SAP CONTRACTS	M/WBE and Non-minority Male
FY14 SAP PO RELEASES_INVENTORY ITEMS	M/WBE and Non-minority Male
FY14 SAP PURCHASE ORDERS	M/WBE and Non-minority Male
FY15 ORACLE CONTRACTS	M/WBE and Non-minority Male
FY15 ORACLE PURCHASE ORDERS	M/WBE and Non-minority Male
FY15 SAP CONTRACTS	M/WBE and Non-minority Male
FY15 SAP PO RELEASES_INVENTORY ITEMS	M/WBE and Non-minority Male
FY15 SAP PURCHASE ORDERS	M/WBE and Non-minority Male
FY16 ORACLE CONTRACTS	M/WBE and Non-minority Male



Source	Type of Information
FY16 ORACLE PURCHASE ORDERS	M/WBE and Non-minority Male
FY16 SAP CONTRACTS	M/WBE and Non-minority Male
FY16 SAP PO RELEASES INVENTORY ITEMS	M/WBE and Non-minority Male
FY16 SAP PURCHASE ORDERS	M/WBE and Non-minority Male
FY17 CONTRACTS_ALL	M/WBE and Non-minority Male
FY17 PURCHASE ORDERS 50K PLUS_2 TABS, PO 100K +	M/WBE and Non-minority Male
FY17 PURCHASE ORDERS 50K PLUS_2 TABS, PO 50K- 99K	M/WBE and Non-minority Male
FY17 PURCHASE ORDERS LESS THAN 50K	M/WBE and Non-minority Male
FY18 CONTRACTS_ALL	M/WBE and Non-minority Male
FY18 PURCHASE ORDERS_ALL	M/WBE and Non-minority Male
SAP POInvoicePayment FY17-18 Disparity Study, FY17	M/WBE and Non-minority Male
SAP POInvoicePayment FY17-18 Disparity Study, FY18	M/WBE and Non-minority Male
Active Vendors SAP 08222019	M/WBE and Non-minority Male
SAP Vendor with Oracle Cross Reference - Combined 10-29-19	M/WBE and Non-minority Male
Government Certification Directories	
City of Houston MWSBE and DBE Directory	M/WBE and Non-minority Male
SBE Metro Certified Directory	M/WBE and Non-minority Male
Texas Department of Transportation Unified Certification Program	M/WBE and Non-minority Male
U.S. Small Business Administration, Houston District Office, 8a Business Development Program	M/WBE and Non-minority Male
U.S. Small Business Administration, Houston District Office, Disadvantaged Business Program	M/WBE and Non-minority Male
U.S. Small Business Administration, Houston District Office, HubZone Program	M/WBE and Non-minority Male
U.S. Small Business Administration, Houston District Office, Veteran Owned Businesses	M/WBE and Non-minority Male
U.S. Small Business Administration, Houston District Office, Woman Owned Businesses	M/WBE
Business Association Membership Lists	
Acres Home Citizens Chamber of Commerce	M/WBE and Non-minority Male
Air Conditioning Contractors of America	M/WBE and Non-minority Male
American Concrete Pumping Association	Non-minority Male
American Institute of Architects, Houston Chapter	M/WBE and Non-minority Male
American Institute of Building Design	Non-minority Male
American Institute of Steel Construction	Non-minority Male
American Shotcrete Association	M/WBE and Non-minority Male
Associated Builders and Contractors of Greater Houston	M/WBE and Non-minority Male
Associated General Contractors Houston Chapter	M/WBE and Non-minority Male
Bay Area Houston Economic Partnership	M/WBE and Non-minority Male





Source	Type of Information
Baytown Chamber of Commerce	M/WBE and Non-minority Male
Central Texas Professional Irrigation Association	Non-minority Male
City of Houston Disabled Owned Businesses	M/WBE and Non-minority Male
Clear Lake Area Chamber of Commerce	M/WBE and Non-minority Male
Coupa Suppliers - Service Disabled Veteran-Owned Small Businesses	M/WBE
Coupa Suppliers - Veteran Owned Businesses	Non-minority Male
Cy-Fair Houston Chamber of Commerce	M/WBE and Non-minority Male
Datafiniti - Harris County - Construction	M/WBE and Non-minority Male
Datafiniti - Houston - Other Services	M/WBE and Non-minority Male
Datafiniti - Houston - Professional Scientific & Technical Services	M/WBE and Non-minority Male
Deer Park Chamber of Commerce	M/WBE and Non-minority Male
Drywall & Acoustical Contractors Association	M/WBE and Non-minority Male
Greater Heights Area Chamber of Commerce	M/WBE and Non-minority Male
Greater Houston Builders Association	M/WBE and Non-minority Male
Greater Tomball Area Chamber of Commerce	M/WBE and Non-minority Male
Houston Area Glass Association	M/WBE and Non-minority Male
Houston East End Chamber of Commerce	M/WBE and Non-minority Male
Houston Metropolitan Chamber	M/WBE and Non-minority Male
Houston Northwest Chamber of Commerce	M/WBE and Non-minority Male
Houston Sheet Metal Contractors Association	Non-minority Male
Houston West Chamber of Commerce	M/WBE and Non-minority Male
Independent Electrical Contractors, Texas Gulf Coast Chapter	M/WBE and Non-minority Male
Insulation Contractors Association of America	M/WBE
Lake Houston Area Chamber of Commerce	M/WBE and Non-minority Male
Mechanical Contractors Association, Texas	Non-minority Male
National Air Duct Cleaners Association	M/WBE and Non-minority Male
National Association of Landscape Professionals	Non-minority Male
National Demolition Association	M/WBE and Non-minority Male
National Fire Sprinkler Association	Non-minority Male
National Insulation Association	M/WBE and Non-minority Male
National Precast Concrete Association	Non-minority Male
National Tile Contractors Association	Non-minority Male
Painting Contractors Association	M/WBE and Non-minority Male
Pasadena Chamber of Commerce	M/WBE and Non-minority Male
Pile Driving Contractors Association, Texas Chapter	M/WBE and Non-minority Male
Precast Concrete Manufacturers Association of Texas	Non-minority Male
Texas Association of Builders	M/WBE and Non-minority Male

Source	Type of Information
Texas Fence Association	M/WBE and Non-minority Male
Texas Glass Association	M/WBE and Non-minority Male
Texas Veterans Owned Business	M/WBE and Non-minority Male
United Masonry Contractors Association	M/WBE and Non-minority Male
Vietnamese Business Directory, Houston	M/WBE
Western Dredging Association	Non-minority Male
Women Contractors Association	M/WBE

C. Determination of Willingness

From the 94 sources listed in Table 6.1, 4,499 unique market area businesses that can provide goods or services in one or more of the three industries were identified. An accounting of the willing businesses derived by source is listed below.

1. METRO Records

A total of 1,036 unique market area businesses were added to the availability database from METRO records.

2. Government Certification Lists

A total of 3,179 unique market area businesses were added to the availability database from government certification lists.

3. Business Community Meetings

A total of 22 unique market area businesses were added to the availability database from METRO's business community meetings.

4. Business Association Membership Lists

A total of 4,354 unique market area businesses were identified from business association membership lists. These businesses were surveyed to determine their willingness to contract with METRO. Of the 4,354 surveyed businesses, 737 refused to participate; 522 telephone numbers were disconnected; 2,205 did not respond; and 890 businesses completed the survey. Of the 890 businesses that completed the survey, 262 were deemed "willing" and added to the availability database.



D. Distribution of Available Prime Contractors by Source, Ethnicity, and Gender

Tables 6.2 through Table 6.4 present the distribution of willing prime contractors by source. A distribution of available businesses by source also was calculated for each industry. As noted in Table 6.2, 91.40% of the construction businesses identified were derived from METRO’s records and government certification lists. Companies identified through community meeting attendees and the business association membership lists represent 8.60% of “willing” businesses.

Table 6.2: Distribution of Prime Contractor Availability Data Sources, Construction

Sources	M/WBEs Percentage	Non M/WBEs Percentage	Source Percentage
Prime Contractor Utilization	7.58%	9.04%	8.51%
Vendor Lists	5.21%	4.18%	4.56%
Certification Lists	84.12%	75.03%	78.33%
Subtotal	96.92%	88.26%	91.40%
Community Meeting Attendees	0.00%	0.40%	0.26%
Business Survey	0.47%	0.13%	0.26%
Willingness Survey	2.61%	11.20%	8.08%
Subtotal	3.08%	11.74%	8.60%
Grand Total*	100.00%	100.00%	100.00%

*The percentages may not total 100 percent due to rounding.

Table 6.3 depicts the data sources for the available professional services prime contractors. As noted, 95.11% of the professional services businesses identified were derived from METRO’s records and government certification lists. Companies identified through community meeting attendees and the business association membership lists represent 4.89% of “willing” businesses.

Table 6.3: Distribution of Prime Contractor Availability Data Sources, Professional Services

Sources	M/WBEs Percentage	Non M/WBEs Percentage	Source Percentage
Prime Contractor Utilization	4.62%	10.02%	7.23%
Vendor Lists	5.88%	6.64%	6.25%
Certification Lists	86.45%	76.46%	81.63%
Subtotal	96.95%	93.13%	95.11%
Community Meeting Attendees	0.00%	1.35%	0.65%
Business Survey	0.21%	0.11%	0.16%
Willingness Survey	2.84%	5.41%	4.08%
Subtotal	3.05%	6.87%	4.89%
Grand Total*	100.00%	100.00%	100.00%

*The percentages may not total 100 percent due to rounding.



Table 6.4 depicts the data sources for the available goods and services prime contractors. As noted, 94.84% of the goods and services businesses identified were derived from METRO’s records and government certification lists. Companies identified through the community meeting attendees and business association membership lists represent 5.16% of “willing” businesses.

Table 6.4: Distribution of Prime Contractor Availability Data Sources, Goods and Services

Sources	M/WBEs Percentage	Non M/WBEs Percentage	Source Percentage
Prime Contractor Utilization	14.10%	36.92%	27.22%
Vendor Lists	6.13%	8.29%	7.37%
Certification Lists	76.30%	48.38%	60.25%
Subtotal	96.53%	93.59%	94.84%
Community Meeting Attendees	0.35%	0.34%	0.34%
Business Survey	0.58%	0.00%	0.25%
Willingness Survey	2.54%	6.07%	4.57%
Subtotal	3.47%	6.41%	5.16%
Grand Total*	100.00%	100.00%	100.00%

*The percentages may not total 100 percent 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.²⁴⁸ Capacity requirements are not delineated in *Croson*, but capacity has been considered in subsequent cases. Specifically, the Third Circuit held certification to be a valid method of defining availability.²⁴⁹ 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.²⁵⁰ 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].”²⁵¹ As noted in *Philadelphia*, “[t]he issue of qualifications can be approached at different levels of specificity[.]”²⁵² Researchers have attempted to define capacity by profiling the age of the business, education of the business owner, business revenue, number of employees, and bonding limits using census data. However, these conventional indices are themselves impacted by race and gender-based discrimination.²⁵³

²⁴⁸ *Croson*, 488 U.S. 469.

²⁴⁹ *Contractors Ass’n of E. Pa.*, 91 F.3d at 603.

²⁵⁰ *Id.*

²⁵¹ *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.)

²⁵² *Contractors Ass’n of E. Pa.*, 91 F.3d at 610.

²⁵³ 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 non-minority males, using measures that controlled for the impact of race and gender discrimination. The first method is a review of the distribution of contracts to determine the size of the contracts that METRO awarded. The second is the identification of the largest contracts awarded to M/WBEs. The third is an analysis of the frequency distribution of METRO contracts awarded to M/WBEs and non-minority male-owned firms. The fourth is a threshold analysis that limited the range of the formal prime contracts to be analyzed, by eliminating outliers. The fifth is an assessment of capacity-related economic factors of M/WBEs non-minority males using the results of the capacity eSurvey.

A. Prime Contract Size Distribution

All of METRO's contracts were ordered by the size of the award to determine the distribution of the awarded contracts. The purpose of this distribution is to gauge the capacity required to perform METRO's contracts. In Table 6.5, contract awards in the three industries were grouped into nine ranges²⁵⁴ and presented according to the following groups: non-minority females, non-minority males, minority females, and minority males.

Of the prime contracts awarded by METRO, 99.04% were less than \$100,000. Additionally, 99.44% were less than \$250,000; 99.65% were less than \$500,000; 99.79% were less than \$1,000,000; and 99.93% were less than \$3,000,000. Only 0.07% of the awarded prime contracts were valued at \$3,000,000 and greater.

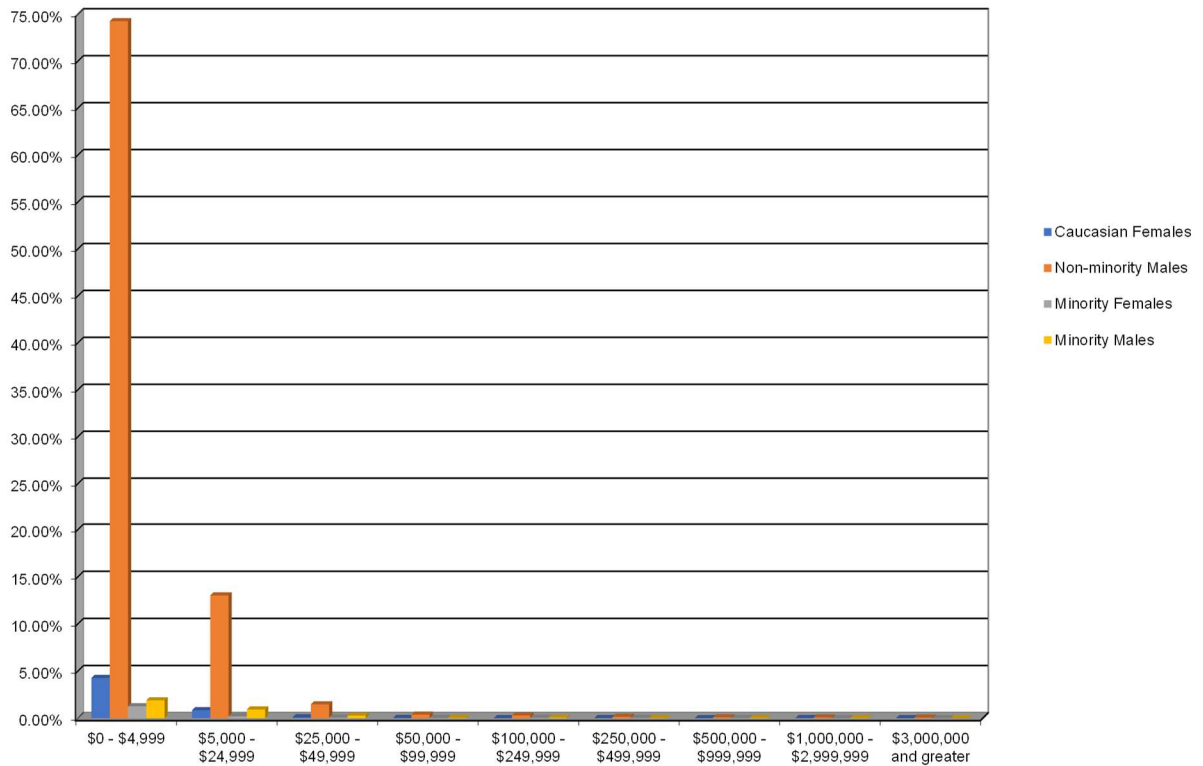
**Table 6.5: All Industry Contracts by Size,
October 1, 2013 to September 30, 2018**

Size	Non-minority				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$0 - \$4,999	1,656	4.27%	28,825	74.26%	490	1.26%	734	1.89%	31,705	81.68%
\$5,000 - \$24,999	328	0.84%	5,055	13.02%	77	0.20%	359	0.92%	5,819	14.99%
\$25,000 - \$49,999	38	0.10%	568	1.46%	27	0.07%	104	0.27%	737	1.90%
\$50,000 - \$99,999	11	0.03%	147	0.38%	13	0.03%	15	0.04%	186	0.48%
\$100,000 - \$249,999	2	0.01%	112	0.29%	16	0.04%	23	0.06%	153	0.39%
\$250,000 - \$499,999	5	0.01%	58	0.15%	13	0.03%	8	0.02%	84	0.22%
\$500,000 - \$999,999	0	0.00%	35	0.09%	7	0.02%	12	0.03%	54	0.14%
\$1,000,000 - \$2,999,999	4	0.01%	32	0.08%	4	0.01%	11	0.03%	51	0.13%
\$3,000,000 and greater	0	0.00%	26	0.07%	1	0.00%	2	0.01%	29	0.07%
Total	2,044	5.27%	34,858	89.80%	648	1.67%	1,268	3.27%	38,818	100.00%



²⁵⁴ The nine- dollar ranges are \$0 - \$4,999; \$5,000 - \$24,999; \$25,000 - \$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 Contracts by Size
October 1, 2013 to September 30, 2018**



The size of METRO's prime contracts is a determinant of the capacity that a willing business needs to be competitive at the prime contract level. The fact that 99.04% of METRO's contracts are less than \$100,000 illustrates that the capacity needed to perform a significant number of METRO's contracts is not considerable.

B. Largest M/WBE Prime Contracts Awarded by Industry

Table 6.6 shows that M/WBEs demonstrated the capacity to perform contracts as large as \$2,999,956 in construction, \$4,428,291 in professional services, and \$4,001,556 in goods and services. The size of the largest prime contracts that METRO awarded to M/WBEs illustrates that M/WBEs have the capacity to perform substantial formal contracts.



Table 6.6: Largest Prime Contracts Awarded by METRO to M/WBEs

Ethnic/Gender Group	Construction	Professional Services (including Architecture and Engineering)	Goods and Services
African American Female	\$1,566,399	\$44,619	\$351,720
African American Male	\$1,607,863	\$244,220	\$2,018,593
Asian-Pacific American Female	-----	\$273,909	\$4,001,556
Asian-Pacific American Male	-----	\$1,600,000	\$2,464,314
Subcontinent Asian American Female	\$356,326	-----	\$132,119
Subcontinent Asian American Male	\$1,924,716	\$993,126	\$18,658
Hispanic American Female	\$204,496	\$1,089,077	\$1,071,036
Hispanic American Male	\$2,999,956	\$4,428,291	\$2,173,964
Native American Female	-----	-----	\$95,857
Native American Male	-----	\$3,779	\$2,999
Caucasian Female	\$1,357,501	\$1,968,817	\$486,310
Largest Dollar Amounts MBEs	\$2,999,956	\$4,428,291	\$4,001,556
Largest Dollar Amounts WBEs	\$1,566,399	\$1,968,817	\$4,001,556

(---) Denotes a group that was not awarded any contracts within the respective industry.

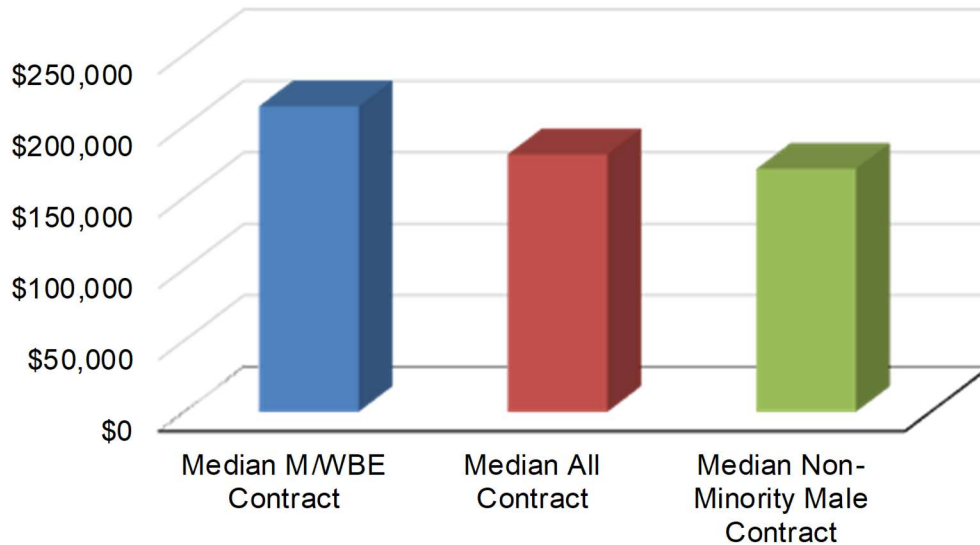
C. Frequency Distribution

METRO formal contracts range from over \$50,000 and under \$3,530,000 for construction, over \$50,000 and under \$1,560,000 for professional services, and over \$50,000 and under \$670,000 for goods and services. A frequency distribution was calculated for all METRO prime contracts to illustrate the center point of the dataset where the size of a contract marks the midpoint between the smallest and largest contracts. The same distribution was calculated separately for M/WBEs and non-minority males. Within each frequency distribution, the median or center point of the dataset was determined. As shown in Chart 6.2, the center point of all METRO prime contracts for all industries was \$172,782. This center point marks the value where 50% of contracts were above and below \$172,782. The median prime contract awarded to M/WBEs was \$212,295 and to non-minority males was \$156,184.

These statistics show a \$39,513 difference between the median of all METRO prime contracts and the median prime contract performed by M/WBEs, illustrating that M/WBEs have slightly greater capacity to perform a significant number of the prime contracts awarded by METRO. As depicted in Table 6.7, there are M/WBEs that have the capacity to perform very large contracts. 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 Contract Value



D. Formal Contract Threshold Analysis

As a further measure to ensure that the available businesses have the capacity to perform the contracts analyzed in the disparity analysis, the prime contracts subject to the statistical analysis was limited. As discussed in *Chapter 3: Prime Contractor Utilization Analysis*, the analysis of formal contracts was limited to the awarded contracts with a dollar value within 1.5 times the interquartile range (IQR). The decision to limit the analysis of disparity to contracts within 1.5 times the IQR was made to eliminate outliers, which increased the reliability of the statistical findings and reduced the business capacity requirements. Table 6.7 illustrates the contract distribution for each industry by percentile.

Table 6.7: Threshold Analysis by Size and Industry

Quantiles	All Industries Combined	Construction	Professional Services (Including Architecture and Engineering)	Goods and Services
Minimum	\$50,127	\$52,837	\$50,451	\$50,127
25%	\$82,666	\$178,736	\$95,000	\$77,749
50% Quantile	\$172,782	\$643,258	\$239,242	\$133,320
Mean	\$848,436	\$1,743,096	\$1,137,990	\$568,916
75%	\$490,000	\$1,520,000	\$680,000	\$320,000
75%+1.5*IQR	\$1,100,000	\$3,530,000	\$1,560,000	\$670,000
Maximum	\$32,520,616	\$28,847,820	\$32,520,616	\$16,310,468

E. Business Capacity Assessment

To assess the relative capacity of the M/WBEs and non-minority male businesses enumerated in the availability analysis, an assessment of socioeconomic factors was administered to the willing



businesses using an eSurvey. The eSurvey collected responses about independent, business-related socioeconomic factors.

1. Profile of Respondents

Of the businesses that completed the business capacity survey, 38.81% were African American; none were Asian-Pacific American; 2.24% were Subcontinent Asian American; 14.93% were Hispanic American; none were Native American; and 41.79% were Caucasian American. Forty-one percent were completed by females of all ethnicities, and 59% were completed by males of all ethnicities as described in Table 6.8 below.

Table 6.8: Ethnicity and Gender of Businesses

Ethnicity and Gender	African American	Asian-Pacific American	Subcontinent Asian American	Hispanic	Native American	Caucasian American	Total
Female	17.91%	0.00%	0.00%	5.22%	0.00%	17.16%	40.30%
Male	20.90%	0.00%	2.24%	9.70%	0.00%	24.63%	59.70%
Total	38.81%	0.00%	2.24%	14.93%	0.00%	41.79%	100.00%

Due to the limited number of responses, ethnic groups were combined and analyzed as “minority males” and “minority females.” As shown in Table 6.9, 14.50% of businesses provided construction services; 51.15% of businesses provided professional services; and 34.35% of businesses provided goods and services.

Table 6.9: Business Owners’ Ethnicity, Gender and Primary Industry

Industry	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
Construction	0.76%	6.11%	1.53%	6.11%	14.50%
Professional Services	16.79%	15.27%	8.40%	10.69%	51.15%
Goods and Services	6.11%	12.21%	7.63%	8.40%	34.35%
Total	23.66%	33.59%	17.56%	25.19%	100.00%

2. Capacity Assessment Findings

Table 6.10 details business annual gross revenue, which shows that 58.59% of businesses earned \$500,000 and under; 12.50% of businesses earned \$500,001 to \$1,000,000; 18.75% of businesses earned \$1,000,001 to \$3,000,000; 1.56% of businesses earned \$3,000,001 to \$5,000,000; 3.91% of businesses earned \$5,000,001 to \$10,000,000; and 4.69% of businesses earned over \$10 million.

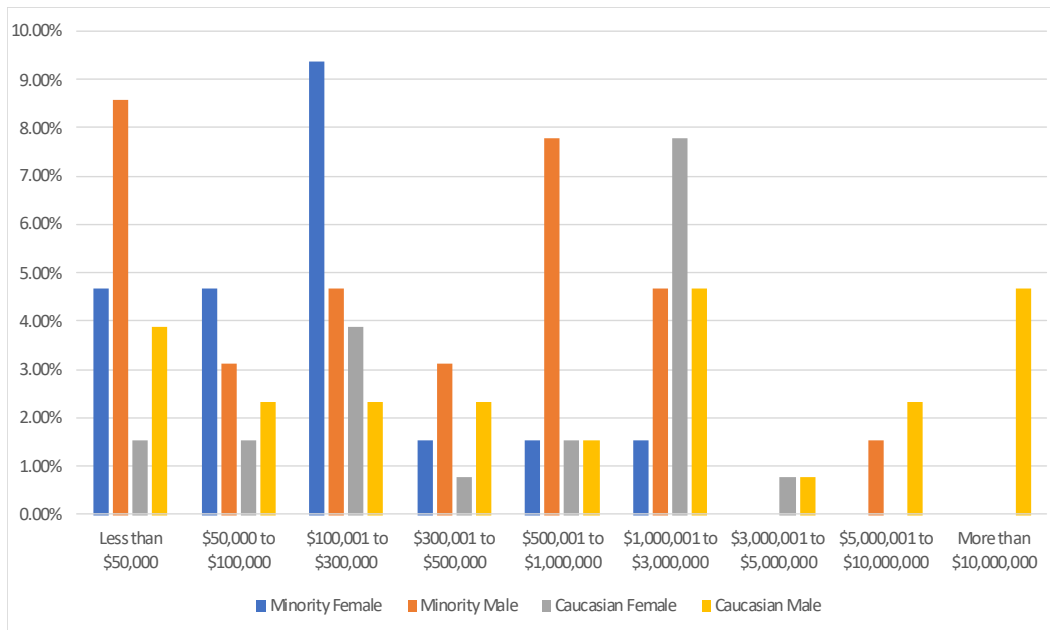


Table 6.10: Annual Gross Revenue

Revenue	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
Less than \$50,000	4.69%	8.59%	1.56%	3.91%	18.75%
\$50,000 to \$100,000	4.69%	3.13%	1.56%	2.34%	11.72%
\$100,001 to \$300,000	9.38%	4.69%	3.91%	2.34%	20.31%
\$300,001 to \$500,000	1.56%	3.13%	0.78%	2.34%	7.81%
\$500,001 to \$1,000,000	1.56%	7.81%	1.56%	1.56%	12.50%
\$1,000,001 to \$3,000,000	1.56%	4.69%	7.81%	4.69%	18.75%
\$3,000,001 to \$5,000,000	0.00%	0.00%	0.78%	0.78%	1.56%
\$5,000,001 to \$10,000,000	0.00%	1.56%	0.00%	2.34%	3.91%
More than \$10,000,000	0.00%	0.00%	0.00%	4.69%	4.69%
Total	23.44%	33.59%	17.97%	25.00%	100.00%

Chart 6.3 illustrates that minority female, minority male, Caucasian female, and Caucasian male revenue is most similar at the \$500,000 and under 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 6.11, 55.83% of business had 0 to 5 employees;²⁵⁵ 25.00% had 6 to 10 employees; 7.50% had 11 to 20 employees; 6.67% had 21 to 50 employees; and 5.00% had more than 50 employees.



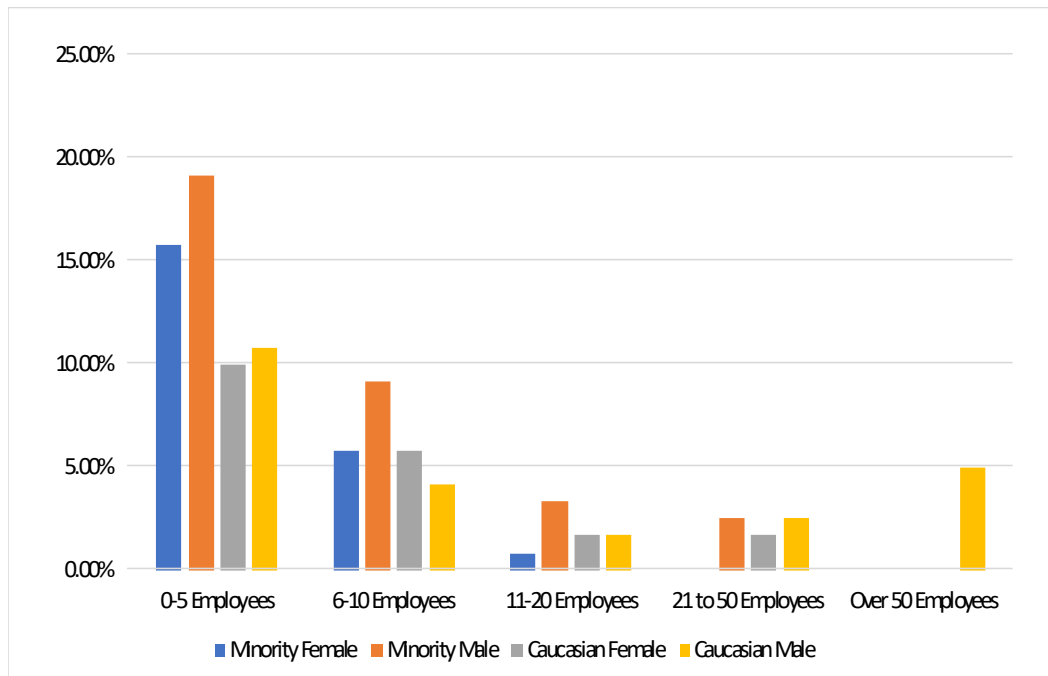
²⁵⁵ Business owners are not counted as employees.

Table 6.11: Number of Employees

Number of Employees	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
0-5 Employees	15.83%	19.17%	10.00%	10.83%	55.83%
6-10 Employees	5.83%	9.17%	5.83%	4.17%	25.00%
11-20 Employees	0.83%	3.33%	1.67%	1.67%	7.50%
21 to 50 Employees	0.00%	2.50%	1.67%	2.50%	6.67%
Over 50 Employees	0.00%	0.00%	0.00%	5.00%	5.00%
Total	22.50%	34.17%	19.17%	24.17%	100.00%

Chart 6.4 illustrates that most businesses are small, including both M/WBEs and non-minority male- owned businesses. As reported in the eSurvey, 80.83% of all businesses are small, employing 10 or fewer persons. While the responding businesses were small, they were smaller than the average Harris County business, as reported by the United States Census Survey of Business Owners. The Census reports that 82.91% of businesses in employ 10 or fewer persons in Harris County.²⁵⁶

Chart 6.4: Number of Employees



One consideration of capacity, as discussed in the case law, considered the ability to bid and perform multiple contracts.²⁵⁷ This factor relates to the human resources and capital resources available to perform multiple contracts concurrently. Table 6.12 illustrates that most businesses,

²⁵⁶ United States Census Bureau, 2007 Survey of Business Owners.

²⁵⁷ 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).

including M/WBEs and non-minority males, performed multiple concurrent contracts within the previous calendar year. In addition, while 2.27% of businesses had 11 to 20 contracts per year and were non-minority male-owned, more businesses—3.41%—had the same number of contracts but were minority male-owned.

Table 6.12: Percent of Annual Contracts

Annual Contracts	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
1 to 5 Contracts	15.91%	23.86%	6.82%	7.95%	54.55%
6 to 10 Contracts	3.41%	5.68%	2.27%	0.00%	11.36%
11 to 20 Contracts	2.27%	3.41%	2.27%	2.27%	10.23%
More than 20 Contracts	0.00%	3.41%	6.82%	13.64%	23.86%
Total	21.59%	36.36%	18.18%	23.86%	100.00%

Chart 6.5 illustrates that most businesses, when including M/WBEs and non-minority males, performed between one and five contracts, illustrating that M/WBEs and non-minority males have successfully performed multiple contracts concurrently. In addition, minority-owned businesses with six to ten contracts per year represented 9.09% of the sample, while non-minority-owned businesses with the same number of contracts represented only 2.27% of the contracts. No non-minority male-owned businesses were in this category.

Chart 6.5: Number of Contracts

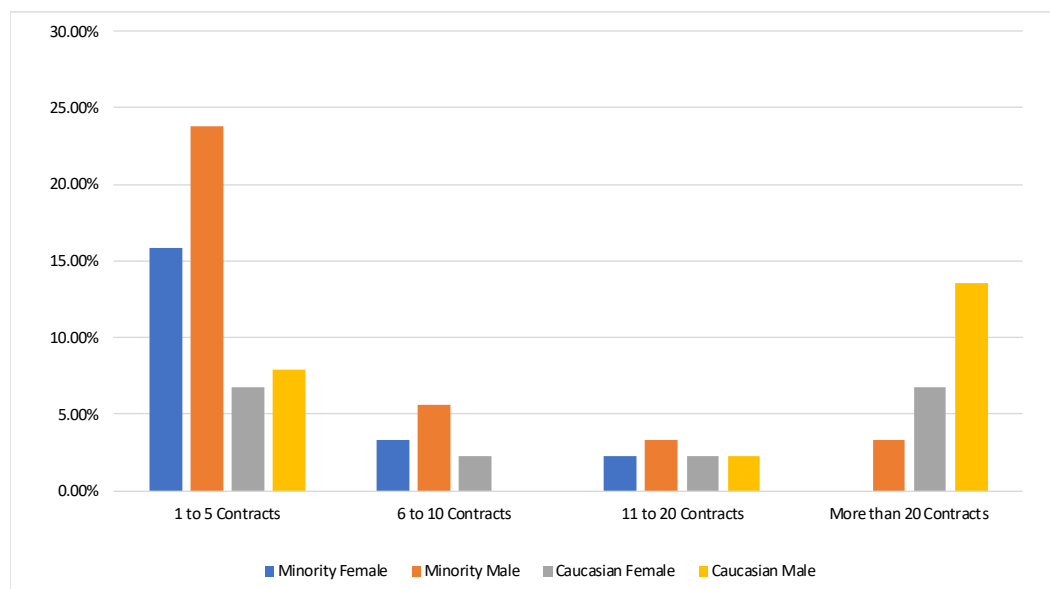


Table 6.13 shows that the majority of businesses are 11 to 50 years old, illustrating that there are mature M/WBEs within the pool of available businesses.

Table 6.13: Years in Business Operation

Years in Operation	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
Less than 5 years	6.87%	9.16%	0.00%	6.87%	22.90%
5 - 10 years	5.34%	4.58%	3.05%	1.53%	14.50%
11 - 20 years	6.11%	12.21%	3.82%	3.05%	25.19%
21 - 50 years	4.58%	6.87%	9.92%	9.16%	30.53%
More than 50 years	0.76%	0.76%	0.76%	4.58%	6.87%
Total	23.66%	33.59%	17.56%	25.19%	100.00%

Chart 6.6 also illustrates that M/WBEs are a growing group of entrepreneurs. However, the availability pool also includes mature M/WBEs with significant experience in their respective fields.

Chart 6.6: Years in Operation

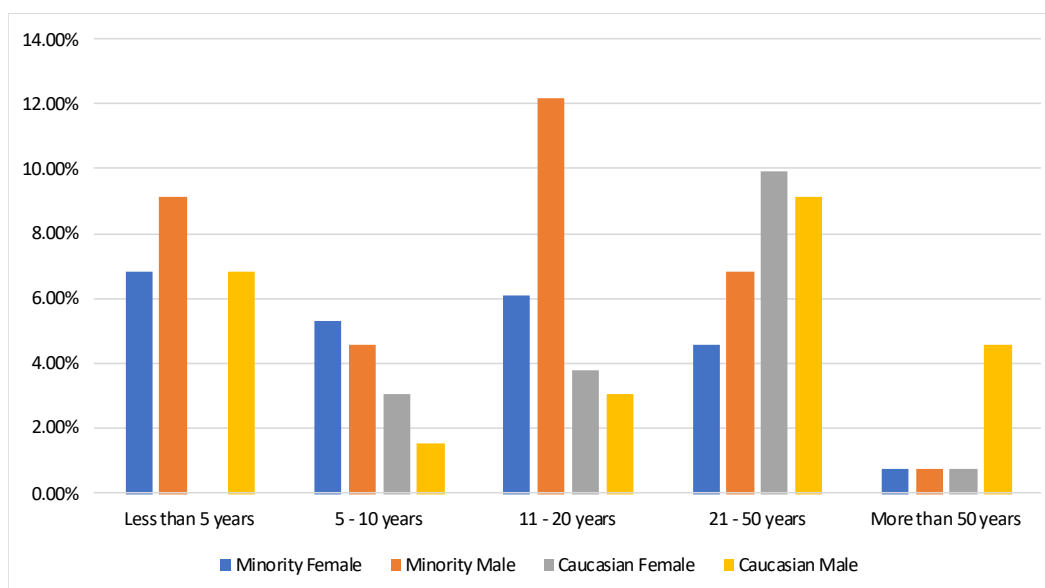


Table 6.14 shows that 37.50% of business owners have a bachelor's degree. However, within this pool, minority males obtained bachelor's degrees at a higher frequency than non-minority male-owned business owners. Despite educational attainment, non-minority males still received most of METRO's contracts, as detailed in *Chapter 3: Prime Contractor Utilization Analysis* and *Chapter 4: Subcontractor Utilization Analysis*.

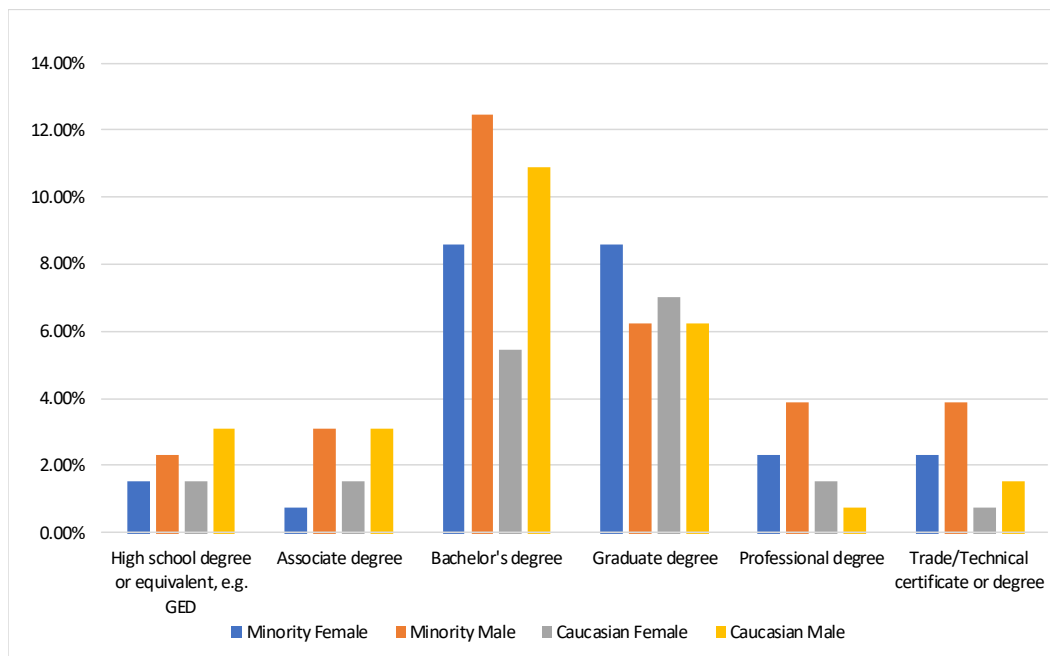


Table 6.14: Education Level of Business Owners

Education	Minority Female	Minority Male	Caucasian Female	Caucasian Male	Total
High school degree or equivalent, e.g. GED	1.56%	2.34%	1.56%	3.13%	8.59%
Associate degree	0.78%	3.13%	1.56%	3.13%	8.59%
Bachelor's degree	8.59%	12.50%	5.47%	10.94%	37.50%
Graduate degree	8.59%	6.25%	7.03%	6.25%	28.13%
Professional degree	2.34%	3.91%	1.56%	0.78%	8.59%
Trade/Technical certificate or degree	2.34%	3.91%	0.78%	1.56%	8.59%
Total	24.22%	32.03%	17.97%	25.78%	100.00%

Chart 6.7 illustrates that most business owners have a bachelor's degree. However, minority males and non-minority males attained graduate degrees at the same rate.

Chart 6.7: Educational Attainment



The analysis shows that among similarly situated M/WBEs and non-minority males, the relative capacity of firms is comparable. Most businesses enumerated in the availability analysis, including M/WBEs and non-minority males, have the following profile:

- Employ ten or fewer employees.
- Performed from one to five public and private contracts concurrently.
- Have gross revenue of \$500,000 or less.



- Operated their business for less than 50 years.
- Have a bachelor's degree.

Considering the metrics reviewed in this analysis, non-minority males are not awarded more contracts because of any single socioeconomic factor or combination of measures. The fact that non-minority males are awarded more contracts is more likely a function of discrimination in public and private-sector business practices. The results of this eSurvey is evidence that willing M/WBEs have demonstrated capacity comparable to non-minority males.



IV. Prime Contractor Availability Analysis

The prime contractor availability analysis is based on the 4,499 willing market area businesses enumerated from the four availability sources described above. The availability of willing market area businesses is presented by ethnicity, gender, and industry in the sections below.

A. Construction Prime Contractor Availability

The distribution of available construction prime contractors is summarized in Table 6.15 below.

African Americans account for 12.21% of the construction prime contractors in METRO's market area.

Asian-Pacific Americans account for 0.95% of the construction prime contractors in METRO's market area.

Subcontinent Asian Americans account for 1.29% of the construction prime contractors in METRO's market area.

Hispanic Americans account for 13.93% of the construction prime contractors in METRO's market area.

Native Americans account for 0.95% of the construction prime contractors in METRO's market area.

Caucasian Females account for 6.96% of the construction prime contractors in METRO's market area.

Non-minority Males account for 63.71% of the construction prime contractors in METRO's market area.

Minority Business Enterprises account for 29.32% of the construction prime contractors in METRO's market area.

Woman Business Enterprises account for 13.59% of the construction prime contractors in METRO's market area.



**Table 6.15: Available Construction Prime Contractors,
October 1, 2013 to September 30, 2018**

Ethnicity	Percent of Businesses
African Americans	12.21%
Asian-Pacific Americans	0.95%
Subcontinent Asian Americans	1.29%
Hispanic Americans	13.93%
Native Americans	0.95%
Caucasian Females	6.96%
Non-minority Males	63.71%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	3.18%
African American Males	9.03%
Asian-Pacific American Females	0.26%
Asian-Pacific American Males	0.69%
Subcontinent Asian American Females	0.26%
Subcontinent Asian American Males	1.03%
Hispanic American Females	2.75%
Hispanic American Males	11.18%
Native American Females	0.17%
Native American Males	0.77%
Caucasian Females	6.96%
Non-minority Males	63.71%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	29.32%
Woman Business Enterprises	13.59%



B. Professional Services Prime Contractor Availability

The distribution of available professional services prime contractors is summarized in Table 6.16 below.

African Americans account for 19.84% of the professional services prime contractors in METRO's market area.

Asian-Pacific Americans account for 2.55% of the professional services prime contractors in METRO's market area.

Subcontinent Asian Americans account for 4.46% of the professional services prime contractors in METRO's market area.

Hispanic Americans account for 9.73% of the professional services prime contractors in METRO's market area.

Native Americans account for 1.03% of the professional services prime contractors in METRO's market area.

Caucasian Females account for 14.13% of the professional services prime contractors in METRO's market area.

Non-minority Males account for 48.26% of the professional services prime contractors in METRO's market area.

Minority Business Enterprises account for 37.61% of the professional services prime contractors in METRO's market area.

Woman Business Enterprises account for 28.86% of the professional services prime contractors in METRO's market area.



**Table 6.16: Available Professional Services Prime Contractors,
October 1, 2013 to September 30, 2018**

Ethnicity	Percent of Businesses
African Americans	19.84%
Asian-Pacific Americans	2.55%
Subcontinent Asian Americans	4.46%
Hispanic Americans	9.73%
Native Americans	1.03%
Caucasian Females	14.13%
Non-minority Males	48.26%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	8.42%
African American Males	11.41%
Asian-Pacific American Females	0.98%
Asian-Pacific American Males	1.58%
Subcontinent Asian American Females	1.47%
Subcontinent Asian American Males	2.99%
Hispanic American Females	3.48%
Hispanic American Males	6.25%
Native American Females	0.38%
Native American Males	0.65%
Caucasian Females	14.13%
Non-minority Males	48.26%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	37.61%
Woman Business Enterprises	28.86%



C. Goods and Services Prime Contractor Availability

The distribution of available goods and services prime contractors is summarized in Table 6.17 below.

African Americans account for 17.05% of the goods and services prime contractors in METRO's market area.

Asian-Pacific Americans account for 1.72% of the goods and services prime contractors in METRO's market area.

Subcontinent Asian Americans account for 1.92% of the goods and services prime contractors in METRO's market area.

Hispanic Americans account for 8.99% of the goods and services prime contractors in METRO's market area.

Native Americans account for 0.93% of the goods and services prime contractors in METRO's market area.

Caucasian Females account for 11.89% of the goods and services prime contractors in METRO's market area.

Non-minority Males account for 57.49% of the goods and services prime contractors in METRO's market area.

Minority Business Enterprises account for 30.61% of the goods and services prime contractors in METRO's market area.

Woman Business Enterprises account for 23.29% of the goods and services prime contractors in METRO's market area.



**Table 6.17: Available Goods and services Prime Contractors,
October 1, 2013 to September 30, 2018**

Ethnicity	Percent of Businesses
African Americans	17.05%
Asian-Pacific Americans	1.72%
Subcontinent Asian Americans	1.92%
Hispanic Americans	8.99%
Native Americans	0.93%
Caucasian Females	11.89%
Non-minority Males	57.49%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	6.98%
African American Males	10.07%
Asian-Pacific American Females	0.44%
Asian-Pacific American Males	1.28%
Subcontinent Asian American Females	0.88%
Subcontinent Asian American Males	1.03%
Hispanic American Females	2.85%
Hispanic American Males	6.14%
Native American Females	0.25%
Native American Males	0.69%
Caucasian Females	11.89%
Non-minority Males	57.49%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	30.61%
Woman Business Enterprises	23.29%



V. Subcontractor Availability Analysis

A. Source of Willing and Able Subcontractors

All available prime contractors were included in the calculation of the subcontractor availability. Additional subcontractors in METRO's market area were identified using the source in Table 6.18.

Subcontractor availability was not calculated for the goods and other services, as the subcontracting activity in that industry was limited.

Table 6.18: Unique Subcontractor Availability Data Source

Type Record	Type Information
Subcontract payments made during FY14-FY18 period downloaded from Metro's B2Gnow	M/WBEs and non-M/WBEs
Contract List downloaded from Metro's B2Gnow	M/WBEs and non-M/WBEs
Subcontract payments provided by prime vendors	M/WBEs and non-M/WBEs
Subcontract payments provided by subcontractors	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, *Croson* does not require a separate measure of subcontractor capacity in the analysis of subcontractor availability.



C. Construction Subcontractor Availability

The distribution of available construction subcontractors is summarized in Table 6.19 below.

African Americans account for 17.39% of the construction subcontractors in METRO's market area.

Asian-Pacific Americans account for 1.92% of the construction subcontractors in METRO's market area.

Subcontinent Asian Americans account for 2.91% of the construction subcontractors in METRO's market area.

Hispanic Americans account for 11.43% of the construction subcontractors in METRO's market area.

Native Americans account for 1.16% of the construction subcontractors in METRO's market area.

Caucasian Females account for 10.98% of the construction subcontractors in METRO's market area.

Non-minority Males account for 54.22% of the construction subcontractors in METRO's market area.

Minority Business Enterprises account for 34.80% of the construction subcontractors in METRO's market area.

Woman Business Enterprises account for 22.10% of the construction subcontractors in METRO's market area.



**Table 6.19: Available Construction Subcontractors
October 1, 2013 to September 30, 2018**

Group	Percent of Businesses
African American	17.39%
Asian-Pacific American	1.92%
Subcontinent Asian American	2.91%
Hispanic American	11.43%
Native American	1.16%
Caucasian Females	10.98%
Non-minority Males	54.22%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	6.29%
African American Males	11.09%
Asian-Pacific American Females	0.65%
Asian-Pacific American Males	1.27%
Subcontinent Asian American Females	0.99%
Subcontinent Asian American Males	1.92%
Hispanic American Females	2.79%
Hispanic American Males	8.64%
Native American Females	0.40%
Native American Males	0.76%
Caucasian Females	10.98%
Non-minority Males	54.22%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	34.80%
Woman Business Enterprises	22.10%



D. Professional Services Subcontractor Availability

The distribution of available professional services subcontractors is summarized in Table 6.20 below.

African Americans account for 19.08% of the professional services subcontractors in METRO's market area.

Asian-Pacific Americans account for 2.12% of the professional services subcontractors in METRO's market area.

Subcontinent Asian Americans account for 3.25% of the professional services subcontractors in METRO's market area.

Hispanic Americans account for 10.92% of the professional services subcontractors in METRO's market area.

Native Americans account for 1.19% of the professional services subcontractors in METRO's market area.

Caucasian Females account for 11.78% of the professional services subcontractors in METRO's market area.

Non-minority Males account for 51.66% of the professional services subcontractors in METRO's market area.

Minority Business Enterprises account for 36.56% of the professional services subcontracts in METRO's market area.

Woman Business Enterprises account for 24.59% of the professional services subcontracts in METRO's market area.



**Table 6.20: Available Professional Services Subcontractors
October 1, 2013 to September 30, 2018**

Group	Percent of Businesses
African American	19.08%
Asian-Pacific American	2.12%
Subcontinent Asian American	3.25%
Hispanic American	10.92%
Native American	1.19%
Caucasian Females	11.78%
Non-minority Males	51.66%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	7.33%
African American Males	11.75%
Asian-Pacific American Females	0.66%
Asian-Pacific American Males	1.46%
Subcontinent Asian American Females	1.13%
Subcontinent Asian American Males	2.12%
Hispanic American Females	3.28%
Hispanic American Males	7.63%
Native American Females	0.40%
Native American Males	0.80%
Caucasian Females	11.78%
Non-minority Males	51.66%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	36.56%
Woman Business Enterprises	24.59%



VI. Summary

This chapter presented the enumeration of willing and able market area businesses by ethnicity, gender, and industry. The capacity of the enumerated businesses was assessed using five methods. They included: 1) a review of METRO's contract size distribution, to identify the capacity needed to perform most METRO contracts; 2) a determination of the largest contracts METRO awarded to M/WBEs; 3) a frequency distribution that defined the median size of contracts awarded to both M/WBEs and non-minority males; 4) a threshold analysis that defined the formal contracts within 1.5 times the IQR in order to eliminate outliers and increase the reliability of the statistical findings; and 5) a business capacity analysis that assessed relevant socioeconomic factors in the private sector effecting business formation and revenue.

The findings from these analyses illustrate that M/WBEs have a socioeconomic profile comparable to similarly situated non-minority males, as well as the capacity to perform large METRO contracts. Minority-owned businesses account for 31.43% of construction, professional services, and goods and services prime contractors; woman-owned businesses account for 22.78%; and non-minority male-owned business account for 56.68%. Minority-owned businesses account for 33.64% of construction and professional services subcontractors; woman-owned businesses account for 22.73%; and non-minority male-owned businesses account for 54.89%.



CHAPTER 7: Prime Contract Disparity Analysis

I. Introduction

The objective of this chapter is to determine if available Minority and Woman-owned Business Enterprise (M/WBE) prime contractors were underutilized on Metropolitan Transit Authority of Harris County, Texas (METRO) prime contracts during the October 1, 2013 to September 30, 2018, study period. Under a fair and equitable system of awarding prime contracts, the proportion of prime contract dollars awarded to M/WBEs should be relatively close to the corresponding proportion of available M/WBEs²⁵⁸ in the relevant market area. If the ratio of utilized M/WBE prime contractors compared to available M/WBE prime contractors is less than one, a statistical test is conducted to calculate the probability of observing the empirical disparity ratio. This analysis assumes a fair and equitable system.²⁵⁹ *City of Richmond v. J.A. Croson Co. (Croson)*²⁶⁰ states that an inference of discrimination can be made if the disparity is statistically significant. Under the *Croson* standard, non-minority male-owned businesses (non-M/WBE) are not subjected to a statistical test of underutilization.

The first step in conducting the statistical test is to calculate the contract dollars 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 contract amount**. The next step is to compute the difference between each ethnic and gender group's expected contract amount and the **actual contract amount** received by each group. The **disparity ratio** is then computed by dividing the actual contract amount by the expected contract amount.

For parametric and non-parametric analyses, the p-value takes into account the number of contracts, amount of contract dollars, and variation in contract dollars. If the difference between the actual and expected number of contracts and total contract dollars has a p-value equal to or less than .05, the difference is statistically significant.²⁶¹

In the simulation analysis, the p-value takes into account a combination of the distribution formulated from the empirical data and the contract dollar amounts. If the actual contract dollar amount, or actual contract rank, falls below the fifth percentile of the distribution, it denotes a p-value less than .05.

²⁵⁸ 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*.

²⁵⁹ 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 statistical standard used in physical and social sciences, and is thus used in the present report to determine if an inference of discrimination can be made.

²⁶⁰ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

²⁶¹ This study does not test statistically the overutilization of minority or gender groups or the underutilization of non-minority males.



Our statistical model employs all three steps simultaneously to each industry. Findings from one of the three methods are reported. If the p-value from any one of the three methods is less than 0.5, the finding is reported in the disparity tables as statistically significant. If the p-value is greater than 0.5, the finding is reported as not statistically significant.

II. Disparity Analysis

A prime contract disparity analysis was performed on contracts awarded in construction, professional services (including architecture and engineering), and goods and services during the October 1, 2013 to September 30, 2018, study period. The informal thresholds were defined according to the Metropolitan Transit Authority of Harris County's procurement policies. The informal thresholds for each industry are listed in Table 7.1.

Table 7.1: Informal Thresholds for Analysis by Industry

Industry	Contract Thresholds
Construction	\$10,000 and Under \$10,001 to \$15,000 \$15,001 to \$50,000
Professional Services	\$10,000 and Under \$10,001 to \$15,000 \$15,001 to \$50,000
Goods and Services	\$10,000 and Under \$10,001 to \$15,000 \$15,001 to \$50,000

To determine which contracts were outliers, the 1.5 x IQR rule was applied to the prime contracts in each of the three industries. Outliers over the threshold were removed for each industry. The statistical analysis performed to define the formal contract levels analyzed is discussed in *Chapter 3: Prime Contractor Utilization Analysis*. The formal contract levels for each industry are listed in Table 7.2.

Table 7.2: Formal Contract Levels for Analysis by Industry

Industry	Contract Level
Construction	Over \$50,000 and Under \$3,530,000
Professional Services	Over \$50,000 and Under \$1,560,000
Goods and Services	Over \$50,000 and Under \$670,000



The findings from the methods employed to calculate statistical significance, 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 below in Table 7.3.

Table 7.3: Statistical Outcome Descriptions

P-Value Outcome	Definition of P-Value Outcome
< .05 *	This underutilization is statistically significant.
not significant	<ul style="list-style-type: none"> • M/WBEs: This underutilization is not statistically significant. • Non-minority males: This overutilization is not statistically significant.
< .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 Contracts by Industry Valued \$10,000 And Under

1. Construction Prime Contracts Valued \$10,000 And Under

The disparity analysis of construction prime contracts valued \$10,000 and under is described below and depicted in Table 7.4 and Chart 7.1.

African Americans represent 12.21% of the available construction businesses and received 5.04% of the dollars on construction contracts valued \$10,000 and under. This underutilization is statistically significant.

Asian-Pacific Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$10,000 and under. While this group was underutilized, there were too few available firms to determine statistical significance.

Subcontinent Asian Americans represent 1.29% of the available construction businesses and received 0.24% of the dollars on construction contracts valued \$10,000 and under. This underutilization is statistically significant.

Hispanic Americans represent 13.93% of the available construction businesses and received 7.28% of the dollars on construction contracts valued \$10,000 and under. This underutilization is statistically significant.

Native Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$10,000 and under. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 6.96% of the available construction businesses and received 6.47% of the dollars on construction contracts valued \$10,000 and under. This underutilization is not statistically significant.

Non-minority Males represent 63.71% of the available construction businesses and received 80.97% of dollars on construction valued \$10,000 and under. This overutilization is statistically significant.

Minority Business Enterprises represent 29.32% of the available construction businesses and received 12.56% of dollars on construction valued \$10,000 and under. This underutilization is statistically significant.

Woman Business Enterprises represent 13.59% of the available construction businesses and received 8.50% of dollars on construction valued \$10,000 and under. This underutilization is statistically significant.



**Table 7.4: Disparity Analysis: Constructions Prime Contracts Valued \$10,000 and Under
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	5.04%	12.21%	\$67,816	\$164,257	-\$96,441	0.41	< .05 *
Asian-Pacific Americans	0.00%	0.95%	\$0	\$12,724	-\$12,724	0.00	---
Subcontinent Asian Americans	0.24%	1.29%	\$3,200	\$17,351	-\$14,151	0.18	< .05 *
Hispanic Americans	7.28%	13.93%	\$97,979	\$187,391	-\$89,413	0.52	< .05 *
Native Americans	0.00%	0.95%	\$0	\$12,724	-\$12,724	0.00	---
Caucasian Females	6.47%	6.96%	\$87,049	\$93,696	-\$6,646	0.93	not significant
Non-minority Males	80.97%	63.71%	\$1,089,242	\$857,143	\$232,099	1.27	< .05 †
TOTAL	100.00%	100.00%	\$1,345,286	\$1,345,286			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	2.03%	3.18%	\$27,360	\$42,799	-\$15,439	0.64	not significant
African American Males	3.01%	9.03%	\$40,456	\$121,457	-\$81,002	0.33	< .05 *
Asian-Pacific American Females	0.00%	0.26%	\$0	\$3,470	-\$3,470	0.00	---
Asian-Pacific American Males	0.00%	0.69%	\$0	\$9,254	-\$9,254	0.00	---
Subcontinent Asian American Females	0.00%	0.26%	\$0	\$3,470	-\$3,470	0.00	---
Subcontinent Asian American Males	0.24%	1.03%	\$3,200	\$13,881	-\$10,681	0.23	not significant
Hispanic American Females	0.00%	2.75%	\$0	\$37,016	-\$37,016	0.00	< .05 *
Hispanic American Males	7.28%	11.18%	\$97,979	\$150,376	-\$52,397	0.65	< .05 *
Native American Females	0.00%	0.17%	\$0	\$2,313	-\$2,313	0.00	---
Native American Males	0.00%	0.77%	\$0	\$10,411	-\$10,411	0.00	---
Caucasian Females	6.47%	6.96%	\$87,049	\$93,696	-\$6,646	0.93	not significant
Non-minority Males	80.97%	63.71%	\$1,089,242	\$857,143	\$232,099	1.27	< .05 †
TOTAL	100.00%	100.00%	\$1,345,286	\$1,345,286			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	12.56%	29.32%	\$168,994	\$394,447	-\$225,453	0.43	< .05 *
Woman Business Enterprises	8.50%	13.59%	\$114,409	\$182,765	-\$68,355	0.63	< .05 *

(*) denotes a statistically significant underutilization.

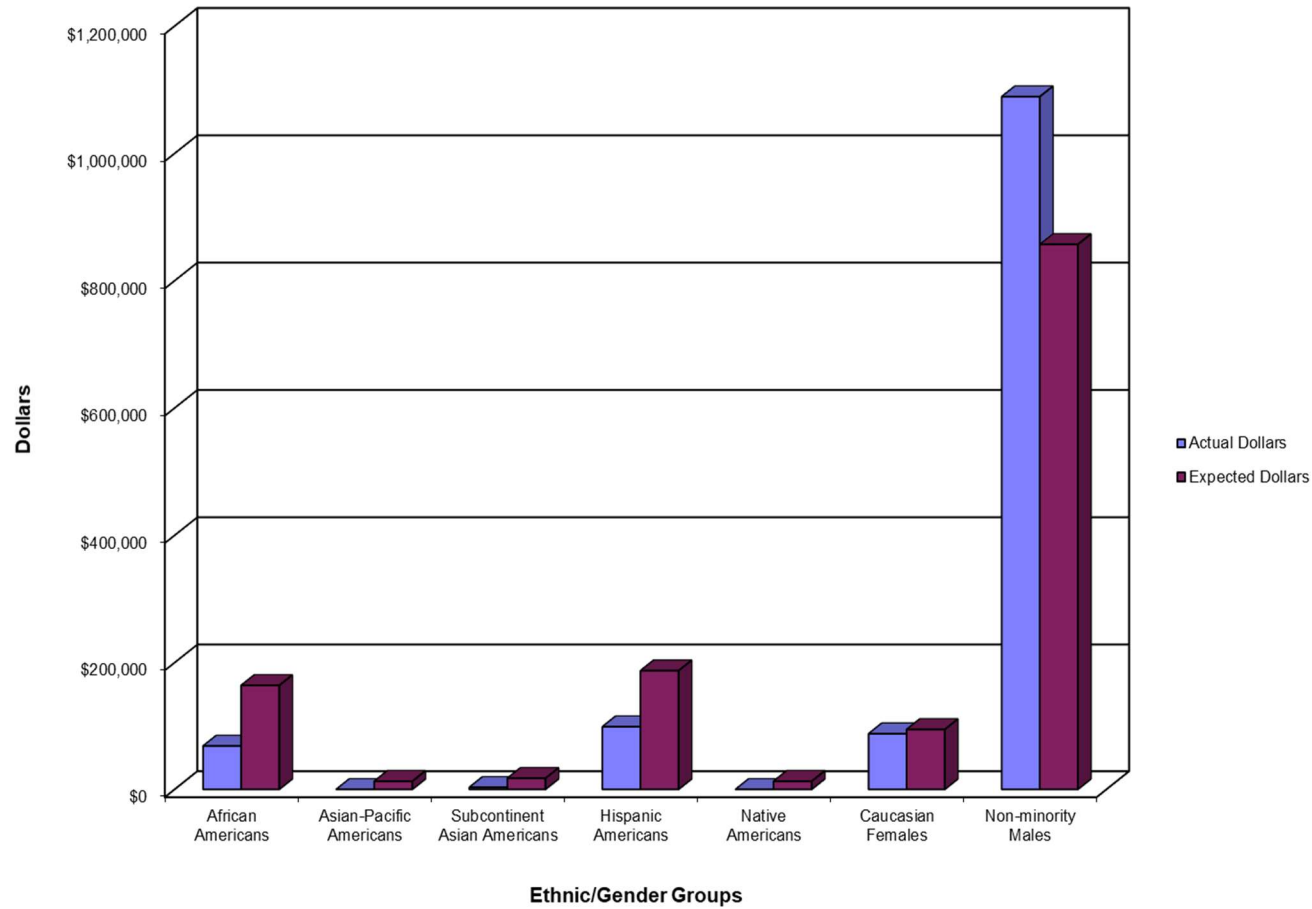
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.1: Disparity Analysis: Construction Prime Contracts Valued \$10,000 and Under
October 1, 2013 to September 30, 2018**



2. Professional Services Prime Contracts Valued \$10,000 and Under

The disparity analysis of professional services prime contracts valued \$10,000 and under is described below and depicted in Table 7.5 and Chart 7.2.

African Americans represent 19.84% of the available professional services businesses and received 4.64% of the dollars on professional services valued \$10,000 and under. This underutilization is statistically significant.

Asian-Pacific Americans represent 2.55% of the available professional services businesses and received 2.01% of the dollars on professional services valued \$10,000 and under. This underutilization is not statistically significant.

Subcontinent Asian Americans represent 4.46% of the available professional services businesses and received 0.15% of the dollars on professional services contracts valued \$10,000 and under. This underutilization is statistically significant.

Hispanic Americans represent 9.73% of the available professional services businesses and received 4.55% of the dollars on professional services contracts valued \$10,000 and under. This underutilization is statistically significant.

Native Americans represent 1.03% of the available professional services businesses and received 0.23% of the dollars on professional services contracts valued \$10,000 and under. This underutilization is not statistically significant.

Caucasian Females represent 14.13% of the available professional services businesses and received 7.87% of the dollars on professional services valued \$10,000 and under. This underutilization is statistically significant.

Non-minority Males represent 48.26% of the available professional services businesses and received 80.54% of dollars on professional services valued \$10,000 and under. This overutilization is statistically significant.

Minority Business Enterprises represent 37.61% of the available professional services businesses and received 11.59% of dollars on professional services valued \$10,000 and under. This underutilization is statistically significant.

Woman Business Enterprises represent 28.86% of the available professional services businesses and received 15.20% of dollars on professional services valued \$10,000 and under. This underutilization is statistically significant.



**Table 7.5: Disparity Analysis: Professional Services Prime Contracts Valued \$10,000 and Under,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	4.64%	19.84%	\$75,618	\$323,102	-\$247,485	0.23	< .05 *
Asian-Pacific Americans	2.01%	2.55%	\$32,803	\$41,605	-\$8,802	0.79	not significant
Subcontinent Asian Americans	0.15%	4.46%	\$2,400	\$72,587	-\$70,187	0.03	< .05 *
Hispanic Americans	4.55%	9.73%	\$74,174	\$158,453	-\$84,279	0.47	< .05 *
Native Americans	0.23%	1.03%	\$3,779	\$16,819	-\$13,040	0.22	not significant
Caucasian Females	7.87%	14.13%	\$128,239	\$230,155	-\$101,916	0.56	< .05 *
Non-minority Males	80.54%	48.26%	\$1,311,777	\$786,068	\$525,709	1.67	< .05 †
TOTAL	100.00%	100.00%	\$1,628,789	\$1,628,789			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	3.33%	8.42%	\$54,283	\$137,208	-\$82,925	0.40	< .05 *
African American Males	1.31%	11.41%	\$21,335	\$185,894	-\$164,559	0.11	< .05 *
Asian-Pacific American Females	1.26%	0.98%	\$20,563	\$15,934	\$4,630	1.29	**
Asian-Pacific American Males	0.75%	1.58%	\$12,240	\$25,671	-\$13,431	0.48	not significant
Subcontinent Asian American Females	0.00%	1.47%	\$0	\$23,901	-\$23,901	0.00	< .05 *
Subcontinent Asian American Males	0.15%	2.99%	\$2,400	\$48,687	-\$46,287	0.05	< .05 *
Hispanic American Females	2.73%	3.48%	\$44,460	\$56,654	-\$12,194	0.78	not significant
Hispanic American Males	1.82%	6.25%	\$29,714	\$101,799	-\$72,086	0.29	< .05 *
Native American Females	0.00%	0.38%	\$0	\$6,196	-\$6,196	0.00	---
Native American Males	0.23%	0.65%	\$3,779	\$10,623	-\$6,843	0.36	---
Caucasian Females	7.87%	14.13%	\$128,239	\$230,155	-\$101,916	0.56	< .05 *
Non-minority Males	80.54%	48.26%	\$1,311,777	\$786,068	\$525,709	1.67	< .05 †
TOTAL	100.00%	100.00%	\$1,628,789	\$1,628,789			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	11.59%	37.61%	\$188,773	\$612,566	-\$423,793	0.31	< .05 *
Woman Business Enterprises	15.20%	28.86%	\$247,545	\$470,047	-\$222,503	0.53	< .05 *

(*) denotes a statistically significant underutilization.

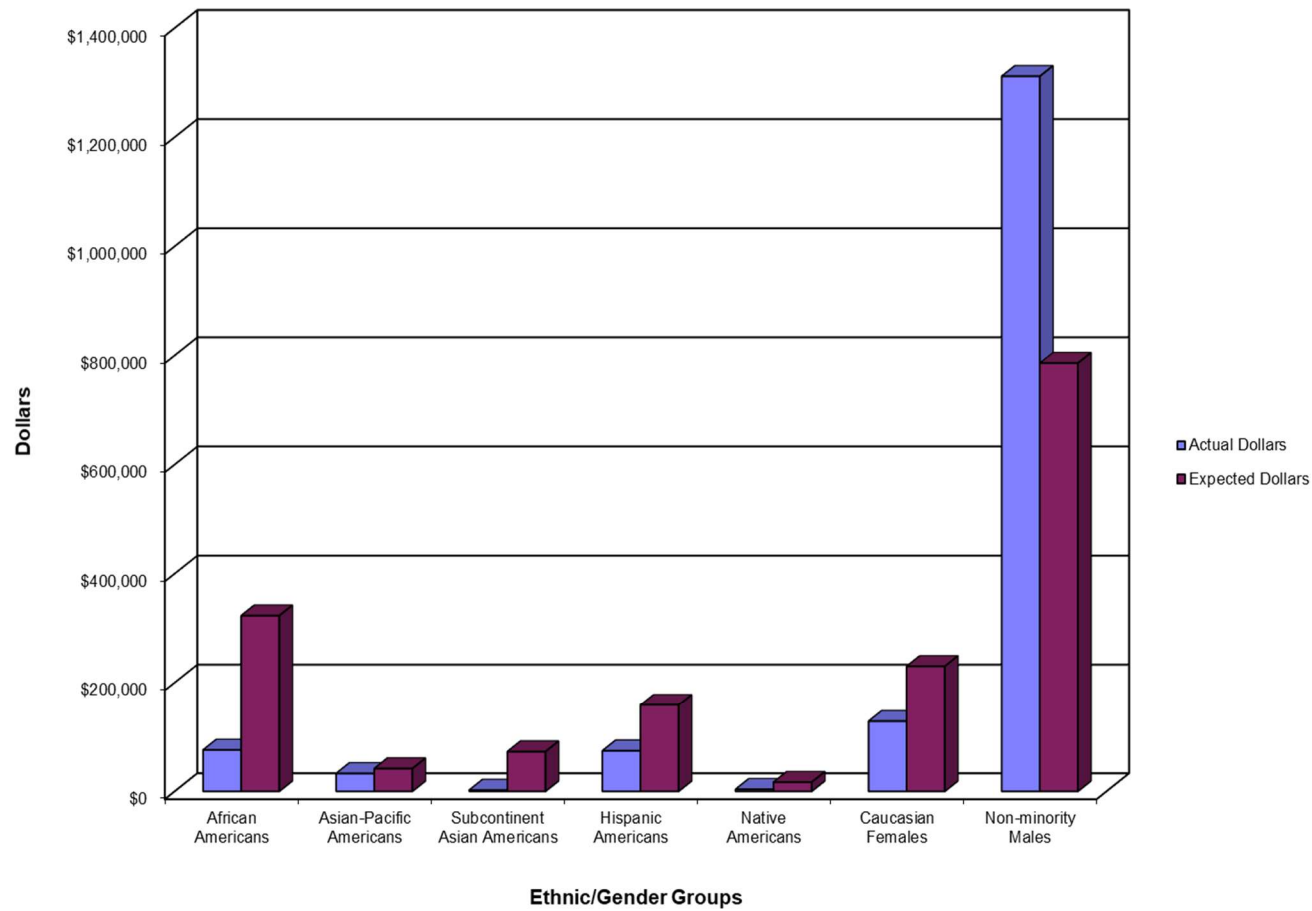
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.2: Disparity Analysis: Professional Services Prime Contracts Valued \$10,000 and Under
October 1, 2013 to September 30, 2018**



3. Goods and Services Prime Contracts Valued \$10,000 and Under

The disparity analysis of goods and services prime contracts valued \$10,000 under is described below and depicted in Table 7.6 and Chart 7.3.

African Americans represent 17.05% of the available goods and services businesses and received 2.04% of the dollars on goods and services valued \$10,000 under. This underutilization is statistically significant.

Asian-Pacific Americans represent 1.72% of the available goods and services businesses and received 0.50% of the dollars on goods and services contracts valued \$10,000 under. This underutilization is statistically significant.

Subcontinent Asian Americans represent 1.92% of the available goods and services businesses and received 0.05% of the dollars on goods and services valued \$10,000 under. This underutilization is statistically significant.

Hispanic Americans represent 8.99% of the available goods and services businesses and received 2.53% of the dollars on goods and services valued \$10,000 under. This underutilization is statistically significant.

Native Americans represent 0.93% of the available goods and services businesses and received 0.03% of the dollars on goods and services valued \$10,000 under. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 11.89% of the available goods and services businesses and received 5.84% of the dollars on goods and services contracts valued \$10,000 under. This underutilization is statistically significant.

Non-minority Males represent 57.49% of the available goods and services businesses and received 89.00% of dollars on goods and services valued \$10,000 under. This overutilization is statistically significant.

Minority Business Enterprises represent 30.61% of the available goods and services businesses and received 5.16% of dollars on goods and services valued \$10,000 under. This underutilization is statistically significant.

Woman Business Enterprises represent 23.29% of the available goods and services businesses and received 6.93% of dollars on goods and services valued \$10,000 under. This underutilization is statistically significant.



**Table 7.6: Disparity Analysis: Goods and Services Prime Contracts Valued \$10,000 and Under,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	2.04%	17.05%	\$1,176,739	\$9,813,628	-\$8,636,889	0.12	< .05 *
Asian-Pacific Americans	0.50%	1.72%	\$289,625	\$989,847	-\$700,222	0.29	< .05 *
Subcontinent Asian Americans	0.05%	1.92%	\$27,580	\$1,102,973	-\$1,075,393	0.03	< .05 *
Hispanic Americans	2.53%	8.99%	\$1,458,049	\$5,175,487	-\$3,717,438	0.28	< .05 *
Native Americans	0.03%	0.93%	\$20,009	\$537,346	-\$517,337	0.04	---
Caucasian Females	5.84%	11.89%	\$3,359,036	\$6,844,086	-\$3,485,050	0.49	< .05 *
Non-minority Males	89.00%	57.49%	\$51,221,508	\$33,089,178	\$18,132,330	1.55	< .05 †
TOTAL	100.00%	100.00%	\$57,552,545	\$57,552,545			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.72%	6.98%	\$412,721	\$4,015,952	-\$3,603,230	0.10	< .05 *
African American Males	1.33%	10.07%	\$764,017	\$5,797,677	-\$5,033,659	0.13	< .05 *
Asian-Pacific American Females	0.13%	0.44%	\$73,962	\$254,532	-\$180,570	0.29	---
Asian-Pacific American Males	0.37%	1.28%	\$215,662	\$735,315	-\$519,653	0.29	< .05 *
Subcontinent Asian American Females	0.00%	0.88%	\$2,393	\$509,064	-\$506,672	0.00	---
Subcontinent Asian American Males	0.04%	1.03%	\$25,187	\$593,908	-\$568,721	0.04	< .05 *
Hispanic American Females	0.22%	2.85%	\$127,436	\$1,640,318	-\$1,512,882	0.08	< .05 *
Hispanic American Males	2.31%	6.14%	\$1,330,613	\$3,535,169	-\$2,204,556	0.38	< .05 *
Native American Females	0.02%	0.25%	\$10,437	\$141,407	-\$130,970	0.07	---
Native American Males	0.02%	0.69%	\$9,572	\$395,939	-\$386,367	0.02	---
Caucasian Females	5.84%	11.89%	\$3,359,036	\$6,844,086	-\$3,485,050	0.49	< .05 *
Non-minority Males	89.00%	57.49%	\$51,221,508	\$33,089,178	\$18,132,330	1.55	< .05 †
TOTAL	100.00%	100.00%	\$57,552,545	\$57,552,545			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	5.16%	30.61%	\$2,972,001	\$17,619,280	-\$14,647,280	0.17	< .05 *
Woman Business Enterprises	6.93%	23.29%	\$3,985,986	\$13,405,359	-\$9,419,374	0.30	< .05 *

(*) denotes a statistically significant underutilization.

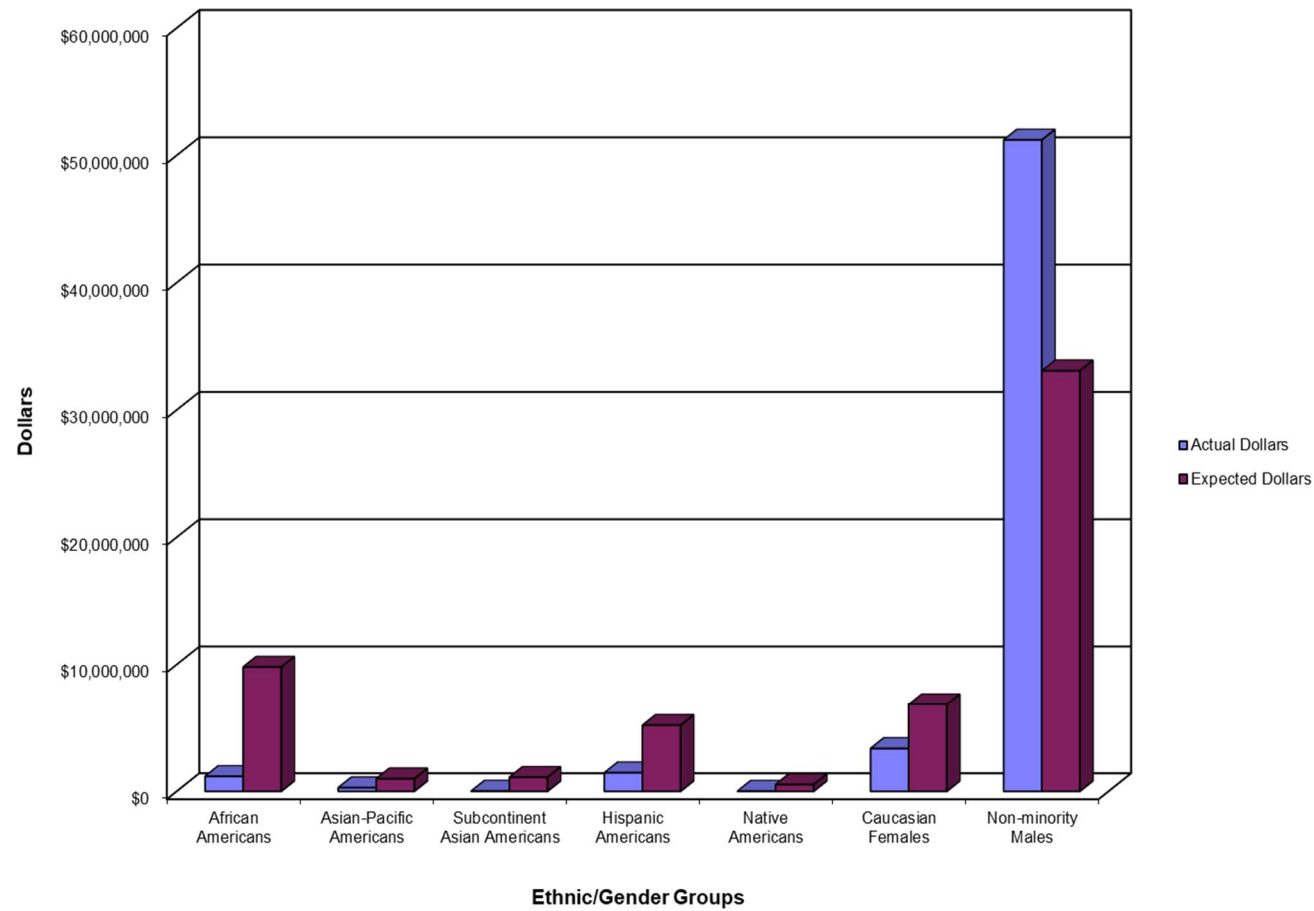
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



Chart 7.3: Disparity Analysis: Goods and Services Prime Contracts Valued \$10,000 and Under, October 1, 2013 to September 30, 2018



B. Disparity Analysis: Informal Prime Contracts by Industry Valued \$10,001 to \$15,000

1. Construction Prime Contracts Valued \$10,001 to \$15,000

The disparity analysis of construction prime contracts valued \$10,001 to \$15,000 is described below and depicted in Table 7.7 and Chart 7.4.

African Americans represent 12.21% of the available construction businesses and received 6.35% of the dollars on construction contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.

Asian-Pacific Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Subcontinent Asian Americans represent 1.29% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Hispanic Americans represent 13.93% of the available construction businesses and received 12.31% of the dollars on construction contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.

Native Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 6.96% of the available construction businesses and received 6.76% of the dollars on construction contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.

Non-minority Males represent 63.71% of the available construction businesses and received 74.57% of dollars on construction contracts valued \$10,001 to \$15,000. This overutilization is not statistically significant.

Minority Business Enterprises represent 29.32% of the available construction businesses and received 18.66% of dollars on construction contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.

Woman Business Enterprises represent 13.59% of the available construction businesses and received 9.82% of dollars on construction contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.



**Table 7.7: Disparity Analysis: Construction Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	6.35%	12.21%	\$25,960	\$49,921	-\$23,961	0.52	not significant
Asian-Pacific Americans	0.00%	0.95%	\$0	\$3,867	-\$3,867	0.00	---
Subcontinent Asian Americans	0.00%	1.29%	\$0	\$5,273	-\$5,273	0.00	---
Hispanic Americans	12.31%	13.93%	\$50,350	\$56,952	-\$6,602	0.88	not significant
Native Americans	0.00%	0.95%	\$0	\$3,867	-\$3,867	0.00	---
Caucasian Females	6.76%	6.96%	\$27,646	\$28,476	-\$830	0.97	not significant
Non-minority Males	74.57%	63.71%	\$304,900	\$260,501	\$44,400	1.17	not significant
TOTAL	100.00%	100.00%	\$408,856	\$408,856			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	3.06%	3.18%	\$12,497	\$13,007	-\$510	0.96	not significant
African American Males	3.29%	9.03%	\$13,462	\$36,913	-\$23,451	0.36	not significant
Asian-Pacific American Females	0.00%	0.26%	\$0	\$1,055	-\$1,055	0.00	---
Asian-Pacific American Males	0.00%	0.69%	\$0	\$2,812	-\$2,812	0.00	---
Subcontinent Asian American Females	0.00%	0.26%	\$0	\$1,055	-\$1,055	0.00	---
Subcontinent Asian American Males	0.00%	1.03%	\$0	\$4,219	-\$4,219	0.00	---
Hispanic American Females	0.00%	2.75%	\$0	\$11,250	-\$11,250	0.00	---
Hispanic American Males	12.31%	11.18%	\$50,350	\$45,702	\$4,648	1.10	**
Native American Females	0.00%	0.17%	\$0	\$703	-\$703	0.00	---
Native American Males	0.00%	0.77%	\$0	\$3,164	-\$3,164	0.00	---
Caucasian Females	6.76%	6.96%	\$27,646	\$28,476	-\$830	0.97	not significant
Non-minority Males	74.57%	63.71%	\$304,900	\$260,501	\$44,400	1.17	not significant
TOTAL	100.00%	100.00%	\$408,856	\$408,856			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	18.66%	29.32%	\$76,310	\$119,880	-\$43,570	0.64	not significant
Woman Business Enterprises	9.82%	13.59%	\$40,143	\$55,545	-\$15,402	0.72	not significant

(*) denotes a statistically significant underutilization.

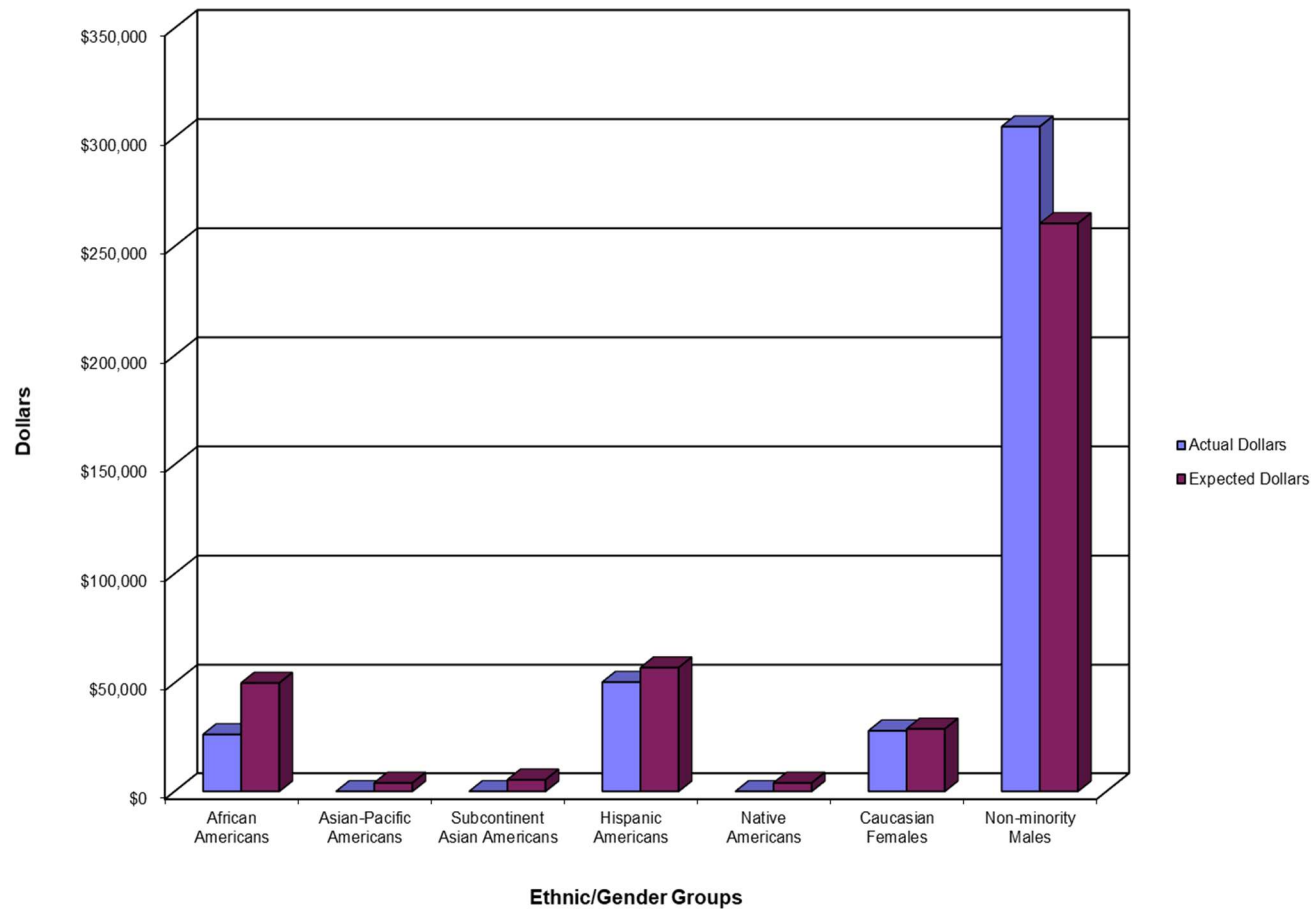
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.4: Disparity Analysis Construction Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**



2. Professional Services Prime Contracts Valued \$10,001 to \$15,000

The disparity analysis of professional services prime contracts valued \$10,001 to \$15,000 is described below and depicted in Table 7.8 and Chart 7.5.

African Americans represent 19.84% of the available professional services businesses and received 5.21% of the dollars on professional services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 2.55% of the available professional services businesses and received 0.00% of the dollars on professional services valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Subcontinent Asian Americans represent 4.46% of the available professional services businesses and received 0.00% of the dollars on professional services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Hispanic Americans represent 9.73% of the available professional services businesses and received 5.59% of the dollars on professional services contracts valued \$10,001 to \$15,000. This underutilization is not statistically significant.

Native Americans represent 1.03% of the available professional services businesses and received 0.00% of the dollars on professional services valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 14.13% of the available professional services businesses and received 3.55% of the dollars on professional services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Non-minority Males represent 48.26% of the available professional services businesses and received 85.66% of dollars on professional services valued \$10,001 to \$15,000. This overutilization is statistically significant.

Minority Business Enterprises represent 37.61% of the available professional services businesses and received 10.79% of dollars on professional services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Woman Business Enterprises represent 28.86% of the available professional services businesses and received 14.34% of dollars on professional services valued \$10,001 to \$15,000. This underutilization is statistically significant.



**Table 7.8: Disparity Analysis: Professional Services Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	5.21%	19.84%	\$47,698	\$181,678	-\$133,981	0.26	< .05 *
Asian-Pacific Americans	0.00%	2.55%	\$0	\$23,394	-\$23,394	0.00	---
Subcontinent Asian Americans	0.00%	4.46%	\$0	\$40,815	-\$40,815	0.00	< .05 *
Hispanic Americans	5.59%	9.73%	\$51,161	\$89,097	-\$37,936	0.57	not significant
Native Americans	0.00%	1.03%	\$0	\$9,457	-\$9,457	0.00	---
Caucasian Females	3.55%	14.13%	\$32,481	\$129,415	-\$96,934	0.25	< .05 *
Non-minority Males	85.66%	48.26%	\$784,519	\$442,001	\$342,518	1.77	< .05 †
TOTAL	100.00%	100.00%	\$915,858	\$915,858			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	5.21%	8.42%	\$47,698	\$77,151	-\$29,454	0.62	not significant
African American Males	0.00%	11.41%	\$0	\$104,527	-\$104,527	0.00	< .05 *
Asian-Pacific American Females	0.00%	0.98%	\$0	\$8,959	-\$8,959	0.00	---
Asian-Pacific American Males	0.00%	1.58%	\$0	\$14,435	-\$14,435	0.00	---
Subcontinent Asian American Females	0.00%	1.47%	\$0	\$13,439	-\$13,439	0.00	---
Subcontinent Asian American Males	0.00%	2.99%	\$0	\$27,376	-\$27,376	0.00	---
Hispanic American Females	5.59%	3.48%	\$51,161	\$31,856	\$19,305	1.61	**
Hispanic American Males	0.00%	6.25%	\$0	\$57,241	-\$57,241	0.00	< .05 *
Native American Females	0.00%	0.38%	\$0	\$3,484	-\$3,484	0.00	---
Native American Males	0.00%	0.65%	\$0	\$5,973	-\$5,973	0.00	---
Caucasian Females	3.55%	14.13%	\$32,481	\$129,415	-\$96,934	0.25	< .05 *
Non-minority Males	85.66%	48.26%	\$784,519	\$442,001	\$342,518	1.77	< .05 †
TOTAL	100.00%	100.00%	\$915,858	\$915,858			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	10.79%	37.61%	\$98,858	\$344,442	-\$245,584	0.29	< .05 *
Woman Business Enterprises	14.34%	28.86%	\$131,340	\$264,305	-\$132,965	0.50	< .05 *

(*) denotes a statistically significant underutilization.

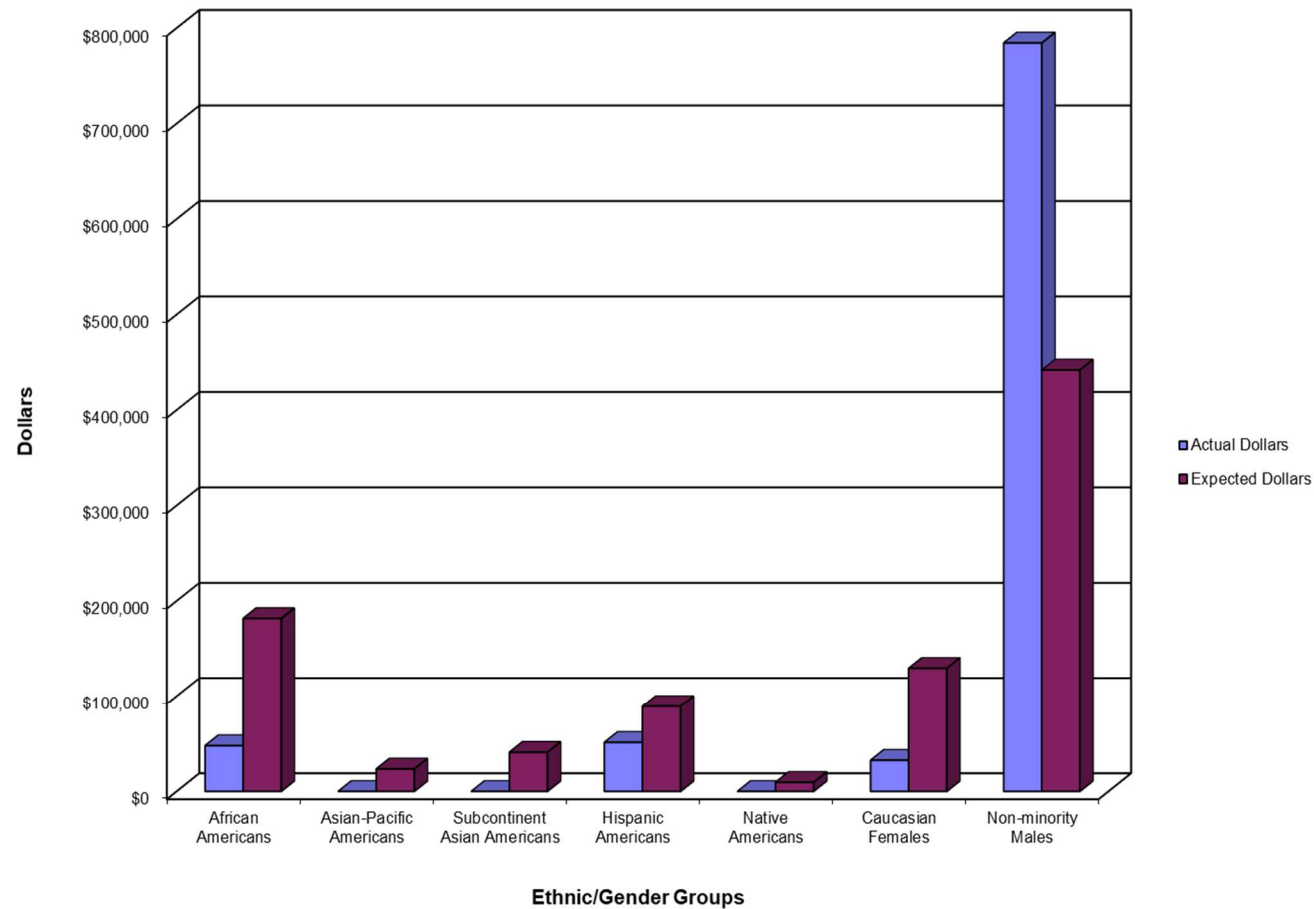
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.5: Disparity Analysis Professional Services Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**



3. Goods and Services Prime Contracts Valued \$10,001 to \$15,000

The disparity analysis of goods and services prime contracts valued \$10,001 to \$15,000 is described below and depicted in Table 7.9 and Chart 7.6.

African Americans represent 17.05% of the available goods and services businesses and received 2.52% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 1.72% of the available goods and services businesses and received 1.97% of the dollars on goods and services valued \$10,001 to \$15,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Subcontinent Asian Americans represent 1.92% of the available goods and services businesses and received 0.09% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Hispanic Americans represent 8.99% of the available goods and services businesses and received 2.75% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Native Americans represent 0.93% of the available goods and services businesses and received 0.00% of the dollars on goods and services valued \$10,001 to \$15,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 11.89% of the available goods and services businesses and received 4.29% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Non-minority Males represent 57.49% of the available goods and services businesses and received 88.37% of the dollars on goods and services valued \$10,001 to \$15,000. This overutilization is statistically significant.

Minority Business Enterprises represent 30.61% of the available goods and services businesses and received 7.33% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.

Woman Business Enterprises represent 23.29% of the available goods and services businesses and received 5.50% of the dollars on goods and services valued \$10,001 to \$15,000. This underutilization is statistically significant.



**Table 7.9: Disparity Analysis: Goods and Services Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	2.52%	17.05%	\$368,448	\$2,490,216	-\$2,121,768	0.15	< .05 *
Asian-Pacific Americans	1.97%	1.72%	\$288,159	\$251,174	\$36,984	1.15	**
Subcontinent Asian Americans	0.09%	1.92%	\$13,350	\$279,880	-\$266,530	0.05	< .05 *
Hispanic Americans	2.75%	8.99%	\$401,221	\$1,313,284	-\$912,063	0.31	< .05 *
Native Americans	0.00%	0.93%	\$0	\$136,352	-\$136,352	0.00	---
Caucasian Females	4.29%	11.89%	\$626,737	\$1,736,692	-\$1,109,955	0.36	< .05 *
Non-minority Males	88.37%	57.49%	\$12,906,087	\$8,396,404	\$4,509,683	1.54	< .05 †
TOTAL	100.00%	100.00%	\$14,604,002	\$14,604,002			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.35%	6.98%	\$51,221	\$1,019,051	-\$967,829	0.05	< .05 *
African American Males	2.17%	10.07%	\$317,227	\$1,471,165	-\$1,153,938	0.22	< .05 *
Asian-Pacific American Females	0.53%	0.44%	\$77,622	\$64,588	\$13,035	1.20	**
Asian-Pacific American Males	1.44%	1.28%	\$210,536	\$186,587	\$23,950	1.13	**
Subcontinent Asian American Females	0.00%	0.88%	\$0	\$129,175	-\$129,175	0.00	---
Subcontinent Asian American Males	0.09%	1.03%	\$13,350	\$150,705	-\$137,355	0.09	< .05 *
Hispanic American Females	0.33%	2.85%	\$48,210	\$416,232	-\$368,022	0.12	< .05 *
Hispanic American Males	2.42%	6.14%	\$353,010	\$897,052	-\$544,041	0.39	< .05 *
Native American Females	0.00%	0.25%	\$0	\$35,882	-\$35,882	0.00	---
Native American Males	0.00%	0.69%	\$0	\$100,470	-\$100,470	0.00	---
Caucasian Females	4.29%	11.89%	\$626,737	\$1,736,692	-\$1,109,955	0.36	< .05 *
Non-minority Males	88.37%	57.49%	\$12,906,087	\$8,396,404	\$4,509,683	1.54	< .05 †
TOTAL	100.00%	100.00%	\$14,604,002	\$14,604,002			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	7.33%	30.61%	\$1,071,178	\$4,470,906	-\$3,399,728	0.24	< .05 *
Woman Business Enterprises	5.50%	23.29%	\$803,792	\$3,401,620	-\$2,597,829	0.24	< .05 *

(*) denotes a statistically significant underutilization.

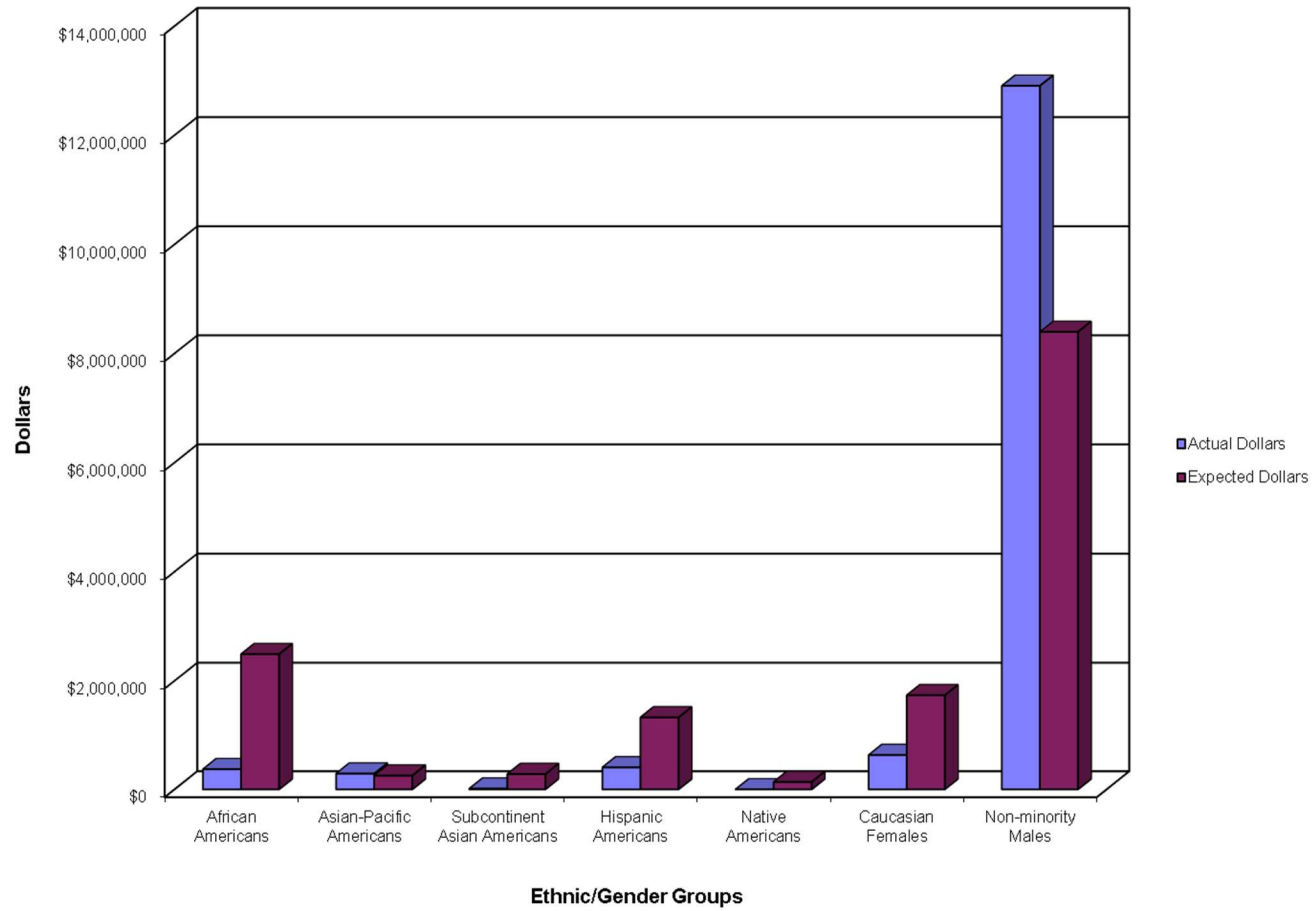
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.6: Disparity Analysis: Goods and Services Prime Contracts Valued \$10,001 to \$15,000,
October 1, 2013 to September 30, 2018**



C. *Disparity Analysis: Informal Prime Contracts by Industry Valued \$15,001 to \$50,000*

1. Construction Prime Contracts Valued \$15,001 to \$50,000

The disparity analysis of construction prime contracts valued \$15,001 to \$50,000 is described below and depicted in Table 7.10 and Chart 7.7.

African Americans represent 12.21% of the available construction businesses and received 8.39% of the dollars on construction contracts valued \$15,001 to \$50,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$15,001 to \$50,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Subcontinent Asian Americans represent 1.29% of the available construction businesses and received 3.52% of the dollars on construction contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Hispanic Americans represent 13.93% of the available construction businesses and received 22.52% of the dollars on construction contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Native Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued \$15,001 to \$50,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 6.96% of the available construction businesses and received 12.18% of the dollars on construction contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Non-minority Males represent 63.71% of the available construction businesses and received 53.38% of dollars on construction contracts \$15,001 to \$50,000. This study does not test statistically the underutilization of non-minority males.

Minority Business Enterprises represent 29.32% of the available construction businesses and received 34.43% of dollars on construction contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Woman Business Enterprises represent 13.59% of the available construction businesses and received 13.86% of dollars on construction contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.



**Table 7.10: Disparity Analysis: Construction Prime Contracts Valued \$15,001 to \$50,000
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	8.39%	12.21%	\$375,939	\$546,889	-\$170,950	0.69	< .05 *
Asian-Pacific Americans	0.00%	0.95%	\$0	\$42,365	-\$42,365	0.00	----
Subcontinent Asian Americans	3.52%	1.29%	\$157,758	\$57,770	\$99,988	2.73	**
Hispanic Americans	22.52%	13.93%	\$1,008,554	\$623,915	\$384,639	1.62	**
Native Americans	0.00%	0.95%	\$0	\$42,365	-\$42,365	0.00	----
Caucasian Females	12.18%	6.96%	\$545,713	\$311,958	\$233,756	1.75	**
Non-minority Males	53.38%	63.71%	\$2,391,130	\$2,853,834	-\$462,704	0.84	**
TOTAL	100.00%	100.00%	\$4,479,094	\$4,479,094			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.78%	3.18%	\$34,788	\$142,499	-\$107,711	0.24	not significant
African American Males	7.62%	9.03%	\$341,151	\$404,389	-\$63,238	0.84	not significant
Asian-Pacific American Females	0.00%	0.26%	\$0	\$11,554	-\$11,554	0.00	----
Asian-Pacific American Males	0.00%	0.69%	\$0	\$30,811	-\$30,811	0.00	----
Subcontinent Asian American Females	0.42%	0.26%	\$18,592	\$11,554	\$7,039	1.61	**
Subcontinent Asian American Males	3.11%	1.03%	\$139,166	\$46,216	\$92,950	3.01	**
Hispanic American Females	0.49%	2.75%	\$21,802	\$123,242	-\$101,440	0.18	< .05 *
Hispanic American Males	22.03%	11.18%	\$986,752	\$500,673	\$486,079	1.97	**
Native American Females	0.00%	0.17%	\$0	\$7,703	-\$7,703	0.00	----
Native American Males	0.00%	0.77%	\$0	\$34,662	-\$34,662	0.00	----
Caucasian Females	12.18%	6.96%	\$545,713	\$311,958	\$233,756	1.75	**
Non-minority Males	53.38%	63.71%	\$2,391,130	\$2,853,834	-\$462,704	0.84	**
TOTAL	100.00%	100.00%	\$4,479,094	\$4,479,094			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	34.43%	29.32%	\$1,542,251	\$1,313,303	\$228,949	1.17	**
Woman Business Enterprises	13.86%	13.59%	\$620,896	\$608,510	\$12,386	1.02	**

(*) denotes a statistically significant underutilization.

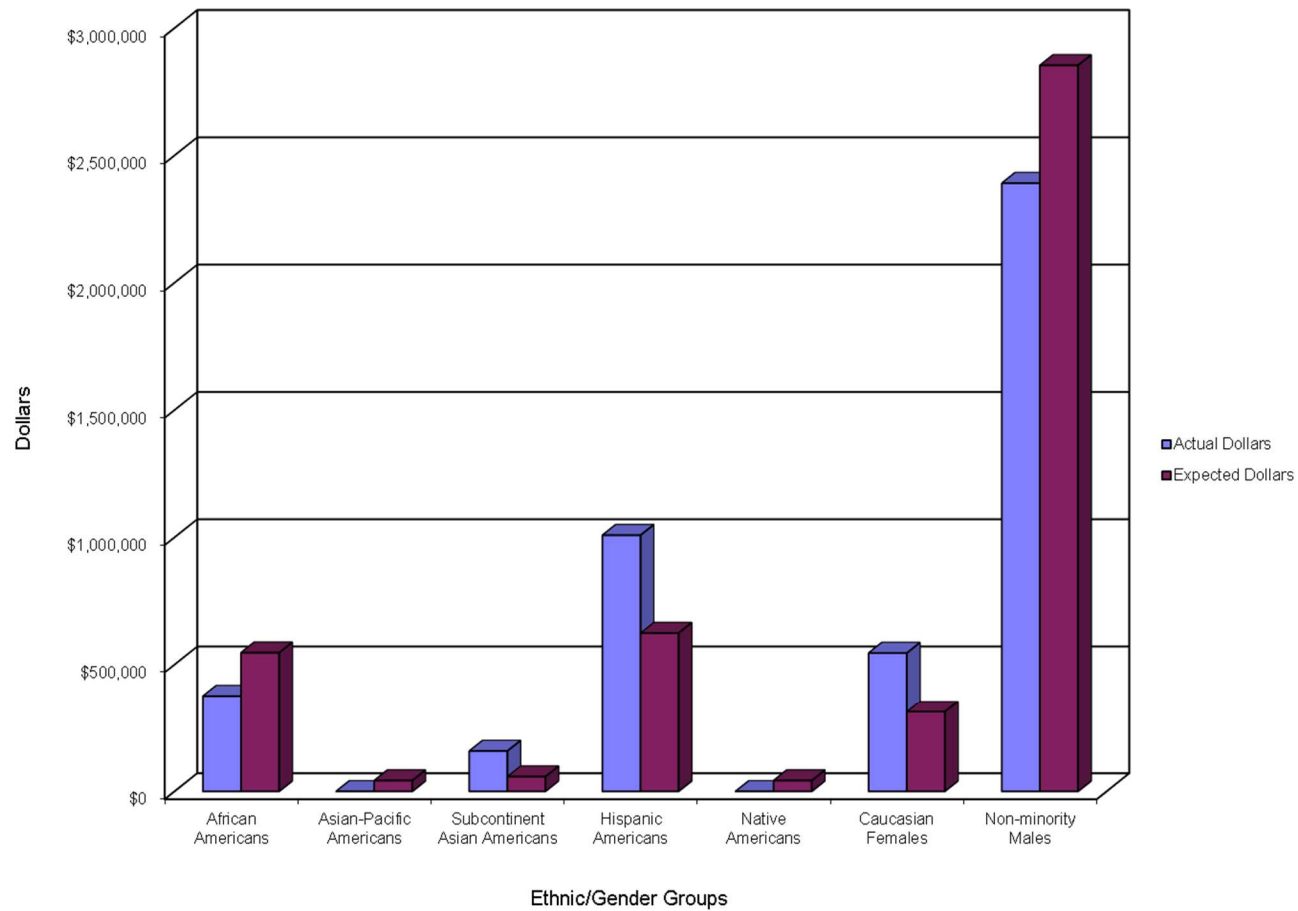
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.7: Disparity Analysis Construction Prime Contracts Valued \$15,001 to \$50,000,
October 1, 2013 to September 30, 2018**



2. Professional Services Prime Contracts Valued \$15,001 to \$50,000

The disparity analysis of professional services prime contracts valued \$15,001 to \$50,000 is described below and depicted in Table 7.11 and Chart 7.8.

African Americans represent 19.84% of the available professional services businesses and received 2.52% of the dollars on professional services contracts valued \$15,001 to \$50,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 2.55% of the available professional services businesses and received 4.99% of the dollars on professional services contracts valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Subcontinent Asian Americans represent 4.46% of the available professional services businesses and received 0.00% of the dollars on professional services contracts valued \$15,001 to \$50,000. This underutilization is statistically significant.

Hispanic Americans represent 9.73% of the available professional services businesses and received 7.33% of the dollars on professional services contracts valued \$15,001 to \$50,000. This underutilization is statistically significant.

Native Americans represent 1.03% of the available professional services businesses and received 0.00% of the dollars on professional services contracts valued \$15,001 to \$50,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 14.13% of the available professional services businesses and received 8.37% of the dollars on professional services contracts valued \$15,001 to \$50,000. This underutilization is statistically significant.

Non-minority Males represent 48.26% of the available professional services businesses and received 76.78% of dollars on professional services contracts valued \$15,001 to \$50,000. This overutilization is statistically significant.

Minority Business Enterprises represent 37.61% of the available professional services businesses and received 14.85% of dollars on professional services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Woman Business Enterprises represent 28.86% of the available professional services businesses and received 15.59% of dollars on professional services valued \$15,001 to \$50,000. This underutilization is statistically significant.



**Table 7.11: Disparity Analysis: Professional Services Prime Contracts Valued \$15,001 to \$50,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	2.52%	19.84%	\$166,579	\$1,308,798	-\$1,142,219	0.13	< .05 *
Asian-Pacific Americans	4.99%	2.55%	\$329,543	\$168,530	\$161,013	1.96	**
Subcontinent Asian Americans	0.00%	4.46%	\$0	\$294,031	-\$294,031	0.00	< .05 *
Hispanic Americans	7.33%	9.73%	\$483,789	\$641,849	-\$158,060	0.75	< .05 *
Native Americans	0.00%	1.03%	\$0	\$68,129	-\$68,129	0.00	---
Caucasian Females	8.37%	14.13%	\$552,151	\$932,295	-\$380,143	0.59	< .05 *
Non-minority Males	76.78%	48.26%	\$5,065,715	\$3,184,145	\$1,881,571	1.59	< .05 †
TOTAL	100.00%	100.00%	\$6,597,777	\$6,597,777			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	1.78%	8.42%	\$117,479	\$555,791	-\$438,312	0.21	< .05 *
African American Males	0.74%	11.41%	\$49,100	\$753,007	-\$703,907	0.07	< .05 *
Asian-Pacific American Females	3.81%	0.98%	\$251,524	\$64,543	\$186,981	3.90	**
Asian-Pacific American Males	1.18%	1.58%	\$78,019	\$103,987	-\$25,968	0.75	not significant
Subcontinent Asian American Females	0.00%	1.47%	\$0	\$96,815	-\$96,815	0.00	< .05 *
Subcontinent Asian American Males	0.00%	2.99%	\$0	\$197,216	-\$197,216	0.00	< .05 *
Hispanic American Females	1.63%	3.48%	\$107,520	\$229,488	-\$121,968	0.47	not significant
Hispanic American Males	5.70%	6.25%	\$376,268	\$412,361	-\$36,093	0.91	not significant
Native American Females	0.00%	0.38%	\$0	\$25,100	-\$25,100	0.00	---
Native American Males	0.00%	0.65%	\$0	\$43,029	-\$43,029	0.00	---
Caucasian Females	8.37%	14.13%	\$552,151	\$932,295	-\$380,143	0.59	< .05 *
Non-minority Males	76.78%	48.26%	\$5,065,715	\$3,184,145	\$1,881,571	1.59	< .05 †
TOTAL	100.00%	100.00%	\$6,597,777	\$6,597,777			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	14.85%	37.61%	\$979,911	\$2,481,338	-\$1,501,427	0.39	< .05 *
Woman Business Enterprises	15.59%	28.86%	\$1,028,675	\$1,904,033	-\$875,358	0.54	< .05 *

(*) denotes a statistically significant underutilization.

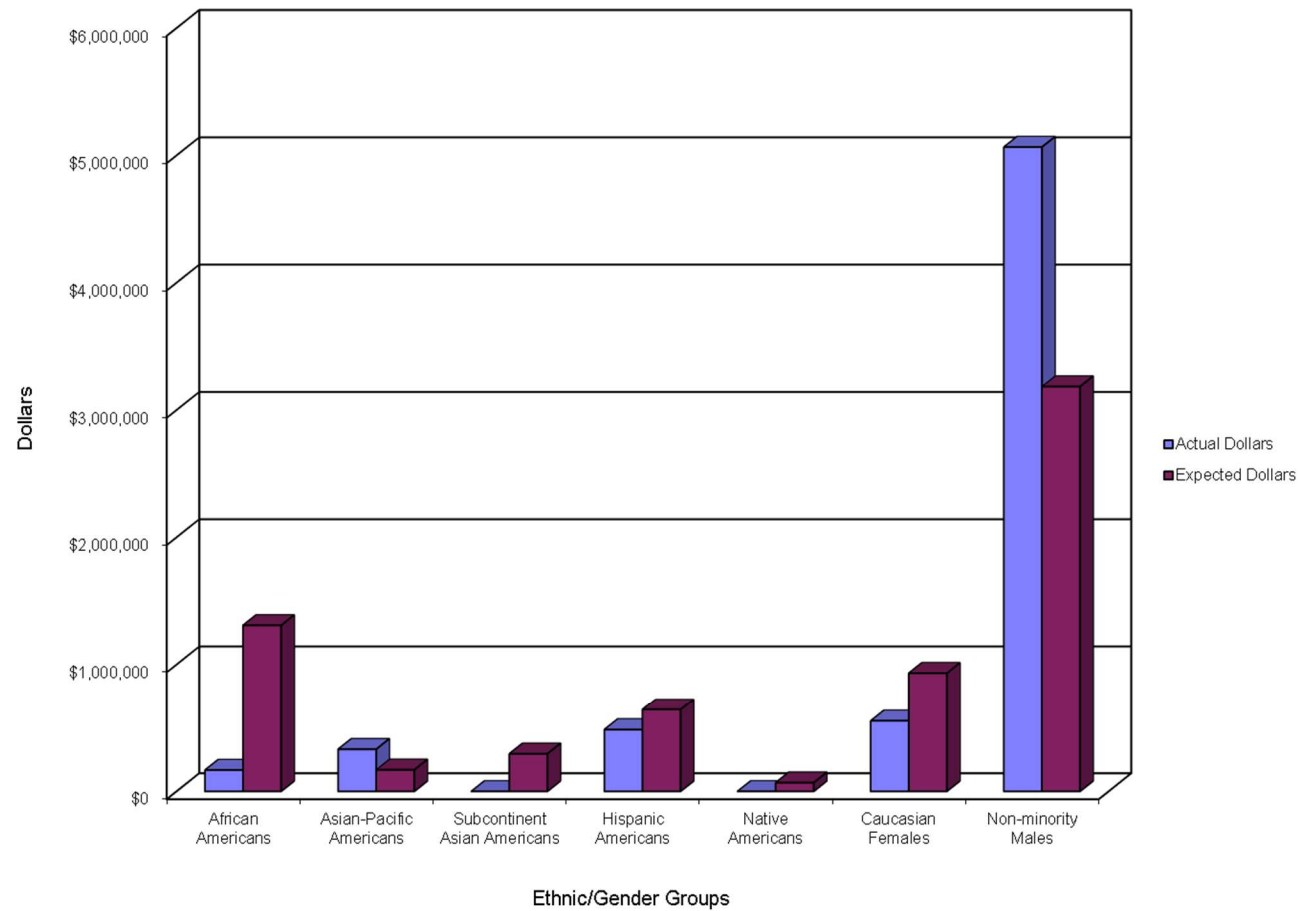
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.8: Disparity Analysis Professional Services Prime Contracts Valued \$15,001 to \$50,000,
October 1, 2013 to September 30, 2018**



3. Goods and Services Prime Contracts Valued Contracts \$15,001 to \$50,000

The disparity analysis of goods and services prime contracts valued \$15,001 to \$50,000 is described below and depicted in Table 7.12 and Chart 7.9.

African Americans represent 17.05% of the available goods and services businesses and received 3.97% of the dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 1.72% of the available goods and services businesses and received 2.38% of the dollars on goods and services valued \$15,001 to \$50,000. This study does not test statistically the overutilization of minority and woman owned businesses.

Subcontinent Asian Americans represent 1.92% of the available goods and services businesses and received 0.15% of the dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Hispanic Americans represent 8.99% of the available goods and services businesses and received 5.73% of the dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Native Americans represent 0.93% of the available goods and services businesses and received 0.09% of the dollars on goods and services valued \$15,001 to \$50,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 11.89% of the available goods and services businesses and received 4.77% of the dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Non-minority Males represent 57.49% of the available goods and services businesses and received 82.93% of dollars on goods and services valued \$15,001 to \$50,000. This overutilization is statistically significant.

Minority Business Enterprises represent 30.61% of the available goods and services businesses and received 12.31% of dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.

Woman Business Enterprises represent 23.29% of the available goods and services businesses and received 6.78% of dollars on goods and services valued \$15,001 to \$50,000. This underutilization is statistically significant.



**Table 7.12: Disparity Analysis: Goods and Services Prime Contracts Valued \$15,001 to \$50,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	3.97%	17.05%	\$1,622,573	\$6,977,066	-\$5,354,493	0.23	< .05 *
Asian-Pacific Americans	2.38%	1.72%	\$973,115	\$703,739	\$269,376	1.38	**
Subcontinent Asian Americans	0.15%	1.92%	\$60,058	\$784,166	-\$724,108	0.08	< .05 *
Hispanic Americans	5.73%	8.99%	\$2,344,036	\$3,679,548	-\$1,335,512	0.64	< .05 *
Native Americans	0.09%	0.93%	\$36,092	\$382,030	-\$345,937	0.09	---
Caucasian Females	4.77%	11.89%	\$1,950,639	\$4,865,850	-\$2,915,211	0.40	< .05 *
Non-minority Males	82.93%	57.49%	\$33,930,862	\$23,524,977	\$10,405,884	1.44	< .05 †
TOTAL	100.00%	100.00%	\$40,917,375	\$40,917,375			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.51%	6.98%	\$209,924	\$2,855,168	-\$2,645,244	0.07	< .05 *
African American Males	3.45%	10.07%	\$1,412,649	\$4,121,898	-\$2,709,249	0.34	< .05 *
Asian-Pacific American Females	0.47%	0.44%	\$191,794	\$180,961	\$10,833	1.06	**
Asian-Pacific American Males	1.91%	1.28%	\$781,321	\$522,777	\$258,544	1.49	**
Subcontinent Asian American Females	0.10%	0.88%	\$41,400	\$361,923	-\$320,523	0.11	---
Subcontinent Asian American Males	0.05%	1.03%	\$18,658	\$422,243	-\$403,586	0.04	< .05 *
Hispanic American Females	0.84%	2.85%	\$343,945	\$1,166,195	-\$822,251	0.29	< .05 *
Hispanic American Males	4.89%	6.14%	\$2,000,091	\$2,513,352	-\$513,261	0.80	< .05 *
Native American Females	0.09%	0.25%	\$36,092	\$100,534	-\$64,442	0.36	---
Native American Males	0.00%	0.69%	\$0	\$281,495	-\$281,495	0.00	---
Caucasian Females	4.77%	11.89%	\$1,950,639	\$4,865,850	-\$2,915,211	0.40	< .05 *
Non-minority Males	82.93%	57.49%	\$33,930,862	\$23,524,977	\$10,405,884	1.44	< .05 †
TOTAL	100.00%	100.00%	\$40,917,375	\$40,917,375			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	12.31%	30.61%	\$5,035,874	\$12,526,548	-\$7,490,674	0.40	< .05 *
Woman Business Enterprises	6.78%	23.29%	\$2,773,795	\$9,530,632	-\$6,756,837	0.29	< .05 *

(*) denotes a statistically significant underutilization.

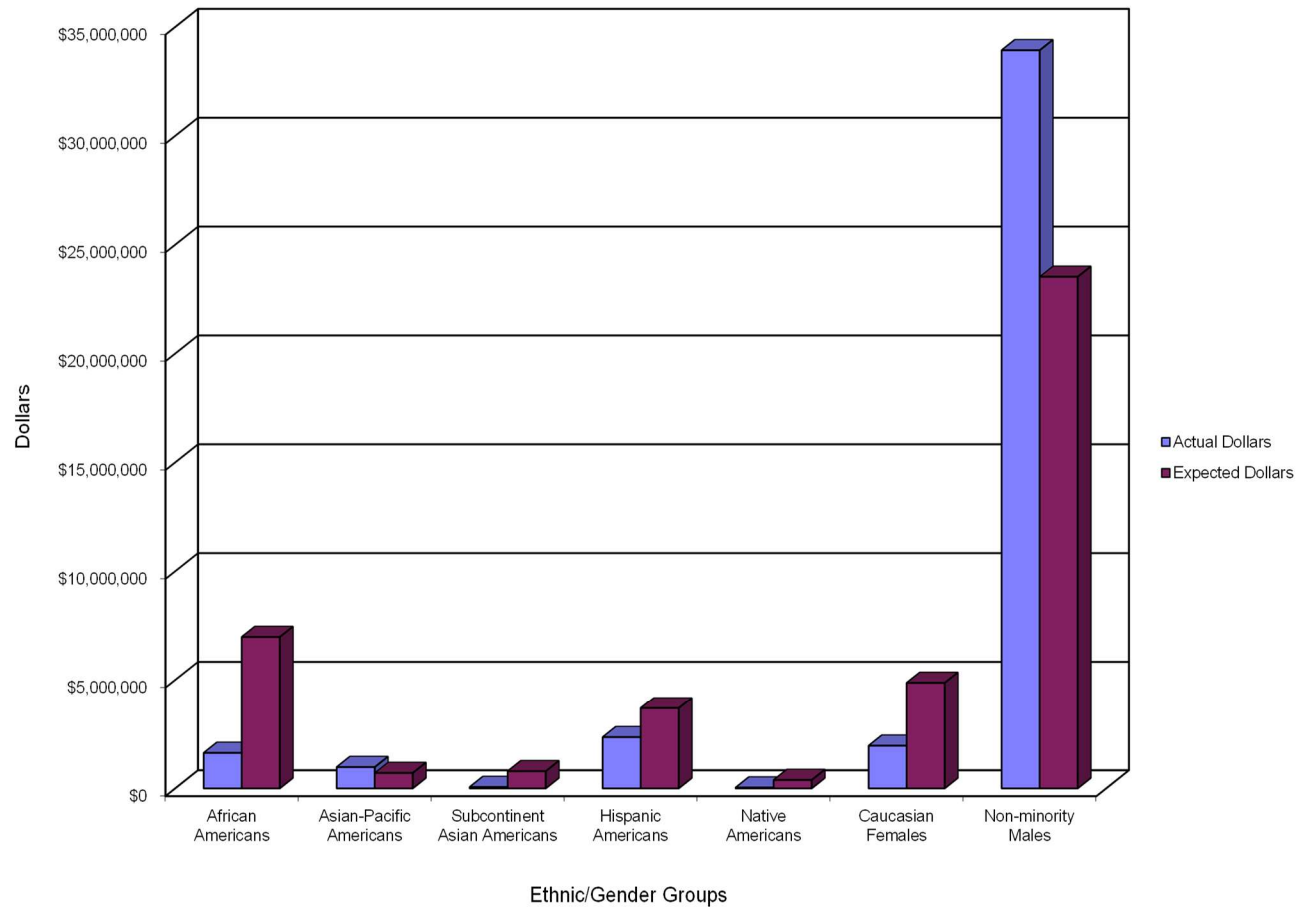
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 7.9: Disparity Analysis Goods and Services Prime Contracts Valued \$15,001 to \$50,000,
October 1, 2013 to September 30, 2018**



D. Disparity Analysis: Formal Prime Contracts by Industry

1. Construction Prime Contracts Valued Over \$50,000 and Under \$3,530,000

The disparity analysis of construction prime contracts valued over \$50,000 and under \$3,530,000 is described below and depicted in Table 7.13 and Chart 7.10.

African Americans represent 12.21% of the available construction businesses and received 19.46% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Asian-Pacific Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Subcontinent Asian Americans represent 1.29% of the available construction businesses and received 4.94% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Hispanic Americans represent 13.93% of the available construction businesses and received 15.50% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Native Americans represent 0.95% of the available construction businesses and received 0.00% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 6.96% of the available construction businesses and received 3.14% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This underutilization is not statistically significant.

Non-minority Males represent 63.71% of the available construction businesses and received 56.95% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This study does not test statistically the underutilization of non-minority male-owned businesses.

Minority Business Enterprises represent 29.32% of the available construction businesses and received 39.90% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Woman Business Enterprises represent 13.59% of the available construction businesses and received 9.06% of the dollars on construction contracts valued over \$50,000 and under \$3,530,000. This underutilization is not statistically significant.



**Table 7.13: Disparity Analysis: Construction Prime Contracts Valued Over \$50,000 and Under \$3,530,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	19.46%	12.21%	\$8,982,932	\$5,634,913	\$3,348,019	1.59	**
Asian-Pacific Americans	0.00%	0.95%	\$0	\$436,507	-\$436,507	0.00	---
Subcontinent Asian Americans	4.94%	1.29%	\$2,281,041	\$595,237	\$1,685,804	3.83	**
Hispanic Americans	15.50%	13.93%	\$7,151,530	\$6,428,562	\$722,967	1.11	**
Native Americans	0.00%	0.95%	\$0	\$436,507	-\$436,507	0.00	---
Caucasian Females	3.14%	6.96%	\$1,450,594	\$3,214,281	-\$1,763,687	0.45	not significant
Non-minority Males	56.95%	63.71%	\$26,284,630	\$29,404,720	-\$3,120,089	0.89	**
TOTAL	100.00%	100.00%	\$46,150,727	\$46,150,727			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	4.56%	3.18%	\$2,104,671	\$1,468,252	\$636,419	1.43	**
African American Males	14.90%	9.03%	\$6,878,261	\$4,166,661	\$2,711,601	1.65	**
Asian-Pacific American Females	0.00%	0.26%	\$0	\$119,047	-\$119,047	0.00	---
Asian-Pacific American Males	0.00%	0.69%	\$0	\$317,460	-\$317,460	0.00	---
Subcontinent Asian American Females	0.77%	0.26%	\$356,326	\$119,047	\$237,278	2.99	**
Subcontinent Asian American Males	4.17%	1.03%	\$1,924,716	\$476,190	\$1,448,526	4.04	**
Hispanic American Females	0.58%	2.75%	\$268,596	\$1,269,839	-\$1,001,243	0.21	not significant
Hispanic American Males	14.91%	11.18%	\$6,882,933	\$5,158,723	\$1,724,211	1.33	**
Native American Females	0.00%	0.17%	\$0	\$79,365	-\$79,365	0.00	---
Native American Males	0.00%	0.77%	\$0	\$357,142	-\$357,142	0.00	---
Caucasian Females	3.14%	6.96%	\$1,450,594	\$3,214,281	-\$1,763,687	0.45	not significant
Non-minority Males	56.95%	63.71%	\$26,284,630	\$29,404,720	-\$3,120,089	0.89	**
TOTAL	100.00%	100.00%	\$46,150,727	\$46,150,727			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	39.90%	29.32%	\$18,415,503	\$13,531,727	\$4,883,776	1.36	**
Woman Business Enterprises	9.06%	13.59%	\$4,180,187	\$6,269,832	-\$2,089,645	0.67	not significant

(*) denotes a statistically significant underutilization.

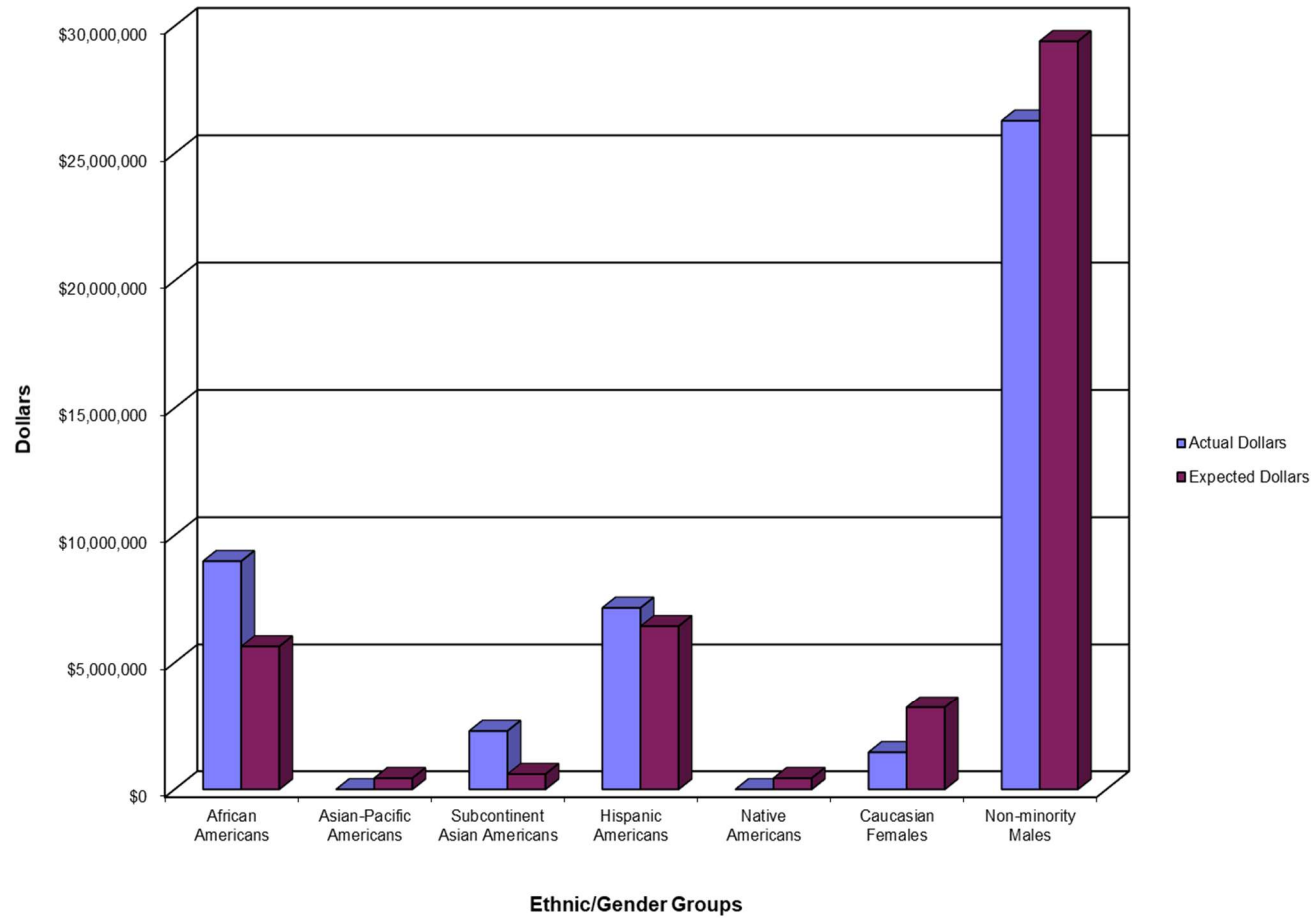
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



Chart 7.10: Disparity Analysis: Construction Prime Contracts Valued Over \$50,000 and Under \$3,530,000, October 1, 2013 to September 30, 2018



2. Professional Services Prime Contracts Valued Over \$50,000 and Under \$1,560,000

The disparity analysis of professional services prime contracts valued Over \$50,000 and Under \$1,560,000 is described below and depicted in Table 7.14 and Chart 7.11.

African Americans represent 19.84% of the available professional services businesses and received 1.36% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 2.55% of the available professional services businesses and received 1.39% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is not statistically significant.

Subcontinent Asian Americans represent 4.46% of the available professional services businesses and received 4.24% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is not statistically significant.

Hispanic Americans represent 9.73% of the available professional services businesses and received 16.99% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Native Americans represent 1.03% of the available professional services businesses and received 0.00% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 14.13% of the available professional services businesses and received 7.66% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is statistically significant.

Non-minority Males represent 48.26% of the available professional services businesses and received 68.36% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This overutilization is statistically significant.

Minority Business Enterprises represent 37.61% of the available on professional services businesses and received 23.98% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is statistically significant.

Woman Business Enterprises represent 28.86% of the available professional services businesses and received 21.48% of the dollars on professional services contracts valued over \$50,000 and under \$1,560,000. This underutilization is statistically significant.



**Table 7.14: Disparity Analysis: Professional Services Prime Contracts Valued Over \$50,000 and Under \$1,560,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	1.36%	19.84%	\$495,922	\$7,223,869	-\$6,727,947	0.07	< .05 *
Asian-Pacific Americans	1.39%	2.55%	\$504,873	\$930,197	-\$425,324	0.54	not significant
Subcontinent Asian Americans	4.24%	4.46%	\$1,545,247	\$1,622,897	-\$77,650	0.95	not significant
Hispanic Americans	16.99%	9.73%	\$6,188,013	\$3,542,664	\$2,645,348	1.75	**
Native Americans	0.00%	1.03%	\$0	\$376,037	-\$376,037	0.00	---
Caucasian Females	7.66%	14.13%	\$2,788,319	\$5,145,770	-\$2,357,451	0.54	< .05 *
Non-minority Males	68.36%	48.26%	\$24,893,843	\$17,574,782	\$7,319,061	1.42	< .05 †
TOTAL	100.00%	100.00%	\$36,416,216	\$36,416,216			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.00%	8.42%	\$0	\$3,067,670	-\$3,067,670	0.00	< .05 *
African American Males	1.36%	11.41%	\$495,922	\$4,156,199	-\$3,660,277	0.12	< .05 *
Asian-Pacific American Females	0.75%	0.98%	\$273,909	\$356,246	-\$82,337	0.77	---
Asian-Pacific American Males	0.63%	1.58%	\$230,964	\$573,951	-\$342,987	0.40	not significant
Subcontinent Asian American Females	0.00%	1.47%	\$0	\$534,368	-\$534,368	0.00	---
Subcontinent Asian American Males	4.24%	2.99%	\$1,545,247	\$1,088,528	\$456,718	1.42	**
Hispanic American Females	13.07%	3.48%	\$4,759,699	\$1,266,651	\$3,493,048	3.76	**
Hispanic American Males	3.92%	6.25%	\$1,428,314	\$2,276,013	-\$847,700	0.63	not significant
Native American Females	0.00%	0.38%	\$0	\$138,540	-\$138,540	0.00	---
Native American Males	0.00%	0.65%	\$0	\$237,497	-\$237,497	0.00	---
Caucasian Females	7.66%	14.13%	\$2,788,319	\$5,145,770	-\$2,357,451	0.54	< .05 *
Non-minority Males	68.36%	48.26%	\$24,893,843	\$17,574,782	\$7,319,061	1.42	< .05 †
TOTAL	100.00%	100.00%	\$36,416,216	\$36,416,216			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	23.98%	37.61%	\$8,734,054	\$13,695,664	-\$4,961,610	0.64	< .05 *
Woman Business Enterprises	21.48%	28.86%	\$7,821,927	\$10,509,245	-\$2,687,318	0.74	< .05 *

(*) denotes a statistically significant underutilization.

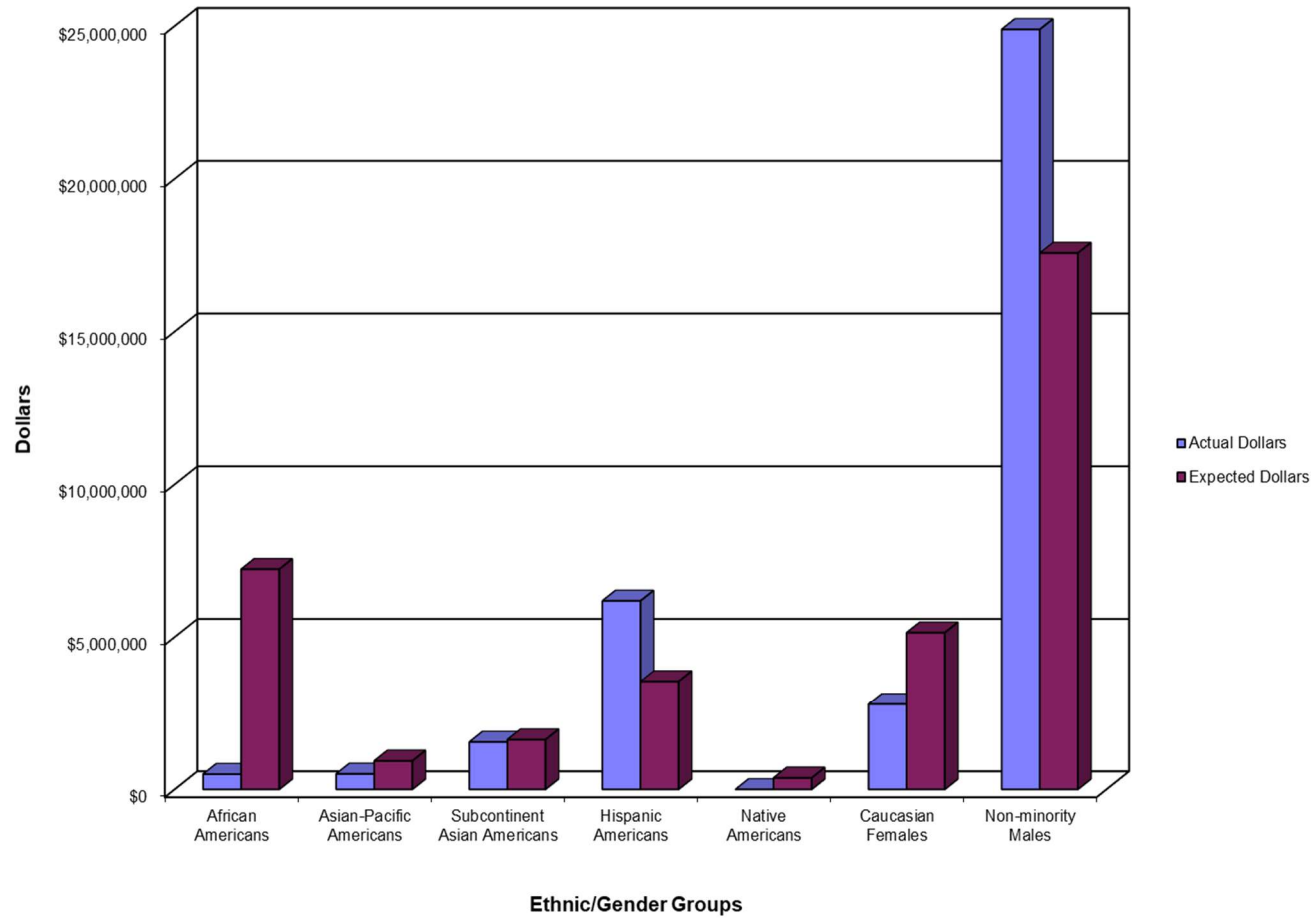
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



Chart 7.11: Disparity Analysis: Professional Services Prime Contracts Valued Over \$50,000 and Under \$1,560,000, October 1, 2013 to September 30, 2018



3. Goods and Services Prime Contracts Valued Over \$50,000 and Under \$670,000

The disparity analysis of goods and services prime contracts valued over \$50,000 and under \$670,000 is described below and depicted in Table 7.15 and Chart 7.12.

African Americans represent 17.05% of the available goods and services businesses and received 7.99% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This underutilization is statistically significant.

Asian-Pacific Americans represent 1.72% of the available goods and services businesses and received 4.09% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Subcontinent Asian Americans represent 1.92% of the available goods and services businesses and received 0.26% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This underutilization is statistically significant.

Hispanic Americans represent 8.99% of the available goods and services businesses and received 12.81% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This study does not test statistically the overutilization of minority and woman-owned businesses.

Native Americans represent 0.93% of the available goods and services businesses and received 0.19% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 11.89% of the available goods and services businesses and received 5.25% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This underutilization is statistically significant.

Non-minority Males represent 57.49% of the available goods and services businesses and received 69.42% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This overutilization is statistically significant.

Minority Business Enterprises represent 30.61% of the available goods and services businesses and received 25.33% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This underutilization is not statistically significant.

Woman Business Enterprises represent 23.29% of the available goods and services businesses and received 18.28% of the dollars on goods and services contracts valued over \$50,000 and under \$670,000. This underutilization is statistically significant.



**Table 7.15: Disparity Analysis: Goods and Services Prime Contracts Valued Over \$50,000 and Under \$670,000,
October 1, 2013 to September 30, 2018**

Ethnicity	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	7.99%	17.05%	\$4,120,204	\$8,791,463	-\$4,671,259	0.47	< .05 *
Asian-Pacific Americans	4.09%	1.72%	\$2,106,799	\$886,747	\$1,220,052	2.38	**
Subcontinent Asian Americans	0.26%	1.92%	\$132,119	\$988,090	-\$855,970	0.13	< .05 *
Hispanic Americans	12.81%	8.99%	\$6,604,357	\$4,636,420	\$1,967,937	1.42	**
Native Americans	0.19%	0.93%	\$95,857	\$481,377	-\$385,520	0.20	---
Caucasian Females	5.25%	11.89%	\$2,706,761	\$6,131,222	-\$3,424,461	0.44	< .05 *
Non-minority Males	69.42%	57.49%	\$35,791,906	\$29,642,685	\$6,149,220	1.21	< .05 †
TOTAL	100.00%	100.00%	\$51,558,004	\$51,558,004			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	1.64%	6.98%	\$843,477	\$3,597,659	-\$2,754,182	0.23	< .05 *
African American Males	6.36%	10.07%	\$3,276,727	\$5,193,804	-\$1,917,077	0.63	< .05 *
Asian-Pacific American Females	3.27%	0.44%	\$1,684,680	\$228,021	\$1,456,659	7.39	**
Asian-Pacific American Males	0.82%	1.28%	\$422,119	\$658,726	-\$236,607	0.64	not significant
Subcontinent Asian American Females	0.26%	0.88%	\$132,119	\$456,041	-\$323,922	0.29	---
Subcontinent Asian American Males	0.00%	1.03%	\$0	\$532,048	-\$532,048	0.00	< .05 *
Hispanic American Females	7.69%	2.85%	\$3,963,519	\$1,469,466	\$2,494,052	2.70	**
Hispanic American Males	5.12%	6.14%	\$2,640,838	\$3,166,954	-\$526,115	0.83	not significant
Native American Females	0.19%	0.25%	\$95,857	\$126,678	-\$30,821	0.76	---
Native American Males	0.00%	0.69%	\$0	\$354,699	-\$354,699	0.00	---
Caucasian Females	5.25%	11.89%	\$2,706,761	\$6,131,222	-\$3,424,461	0.44	< .05 *
Non-minority Males	69.42%	57.49%	\$35,791,906	\$29,642,685	\$6,149,220	1.21	< .05 †
TOTAL	100.00%	100.00%	\$51,558,004	\$51,558,004			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	25.33%	30.61%	\$13,059,337	\$15,784,096	-\$2,724,759	0.83	not significant
Woman Business Enterprises	18.28%	23.29%	\$9,426,413	\$12,009,088	-\$2,582,674	0.78	< .05 *

(*) denotes a statistically significant underutilization.

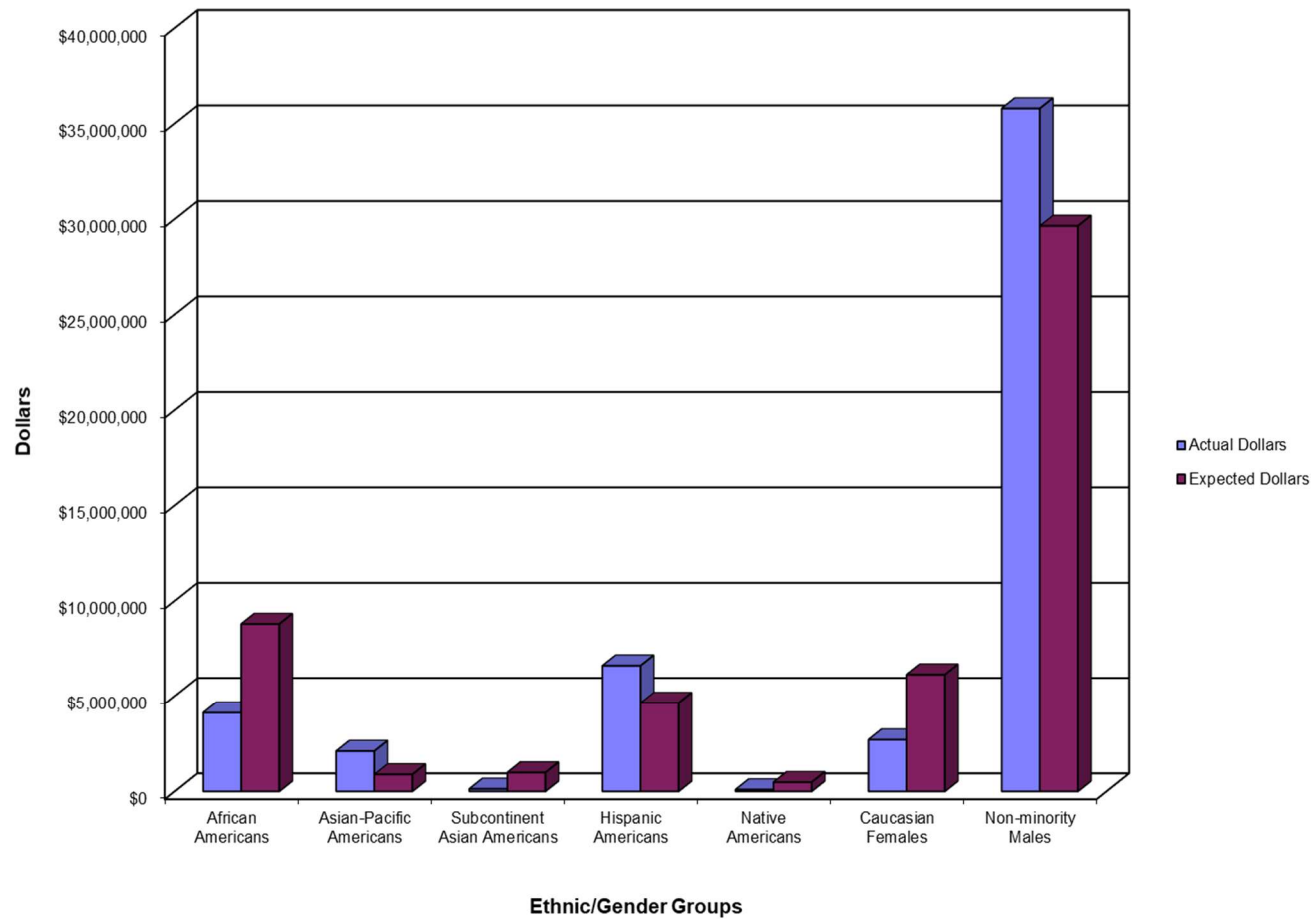
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



Chart 7.12: Disparity Analysis: Goods and Services Prime Contracts Valued Over \$50,000 and Under \$670,000, October 1, 2013 to September 30, 2018



III. Disparity Analysis Summary

A. Construction Prime Contracts

As indicated in Table 7.16 below, disparity was found for African American, Subcontinent Asian American, Hispanic American, minority-owned, and woman-owned businesses on construction prime contracts valued \$10,000 and under.

Disparity was found for African American prime contractors on construction contracts valued \$15,001 to \$50,000.

Disparity was not found on construction contracts valued \$10,001 to \$15,000 and over \$50,000 and under \$3,530,000.

**Table 7.16: Disparity Summary: Construction Prime Contract Dollars,
October 1, 2013 to September 30, 2018**

Ethnicity/ Gender	Construction			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts Over \$50,000 and Under \$3,530,000
African Americans	<i>Disparity</i>	No Disparity	<i>Disparity</i>	No Disparity
Asian-Pacific Americans	No Disparity	No Disparity	No Disparity	No Disparity
Subcontinent Asian Americans	<i>Disparity</i>	No Disparity	No Disparity	No Disparity
Hispanic Americans	<i>Disparity</i>	No Disparity	No Disparity	No Disparity
Native Americans	No Disparity	No Disparity	No Disparity	No Disparity
Caucasian Females	Underutilized	Underutilized	No Disparity	Underutilized
Minority Business Enterprises	<i>Disparity</i>	No Disparity	No Disparity	No Disparity
Woman Business Enterprises	<i>Disparity</i>	No Disparity	No Disparity	No Disparity



B. Professional Services Prime Contracts

As indicated in Table 7.17 below, disparity was found for African American, Subcontinent Asian American, Hispanic American, Caucasian female, minority-owned, and woman-owned businesses on professional services prime contracts \$10,000 and under.

Disparity was found for African American, Subcontinent Asian American, Caucasian female, minority-owned, and woman-owned businesses on professional services prime contracts valued \$10,001 to \$15,000.

Disparity was found for African American, Subcontinent Asian American, Hispanic American, Caucasian female, minority-owned, and woman-owned businesses on professional services prime contracts valued \$15,001 to \$50,000.

Disparity was also found for African American, Caucasian female, minority-owned, and woman-owned businesses on professional services prime contracts valued \$50,00 and under \$1,560,000.

Table 7.17: Disparity Summary: Professional Services Prime Contract Dollars, October 1, 2013 to September 30, 2018

Ethnicity/ Gender	Professional Services			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts Over \$50,000 and Under \$1,560,000
African Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	No Disparity	No Disparity	No Disparity
Subcontinent Asian Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	No Disparity
Hispanic Americans	<i>Disparity</i>	No Disparity	<i>Disparity</i>	No Disparity
Native Americans	No Disparity	No Disparity	No Disparity	No Disparity
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Minority Business Enterprises	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Woman Business Enterprises	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>



C. Goods and Services Prime Contracts

As indicated in Table 7.18 below, disparity was found for African American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, Caucasian female, minority-owned, and woman-owned businesses on goods and services prime contracts \$10,000 and under.

Disparity was found for African American, Subcontinent Asian American, Hispanic American, Caucasian female, minority-owned, and woman-owned businesses on goods and services prime contracts valued \$10,001 to \$15,000.

Disparity was found for African American, Subcontinent Asian American, Hispanic American, Caucasian female, minority-owned, and woman-owned businesses on goods and services prime contracts valued \$15,001 to \$50,000.

Disparity was also found for African American, Subcontinent Asian American, Caucasian female, and woman-owned businesses on goods and services prime contracts valued over \$50,000 and under \$670,000.

Table 7.18: Disparity Summary: Goods and Services Prime Contract Dollars, October 1, 2013 to September 30, 2018

Ethnicity/ Gender	Goods and Services			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts Over \$50,000 and Under \$670,000
African Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	<i>Disparity</i>	No Disparity	No Disparity	No Disparity
Subcontinent Asian Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	No Disparity
Native Americans	No Disparity	No Disparity	No Disparity	No Disparity
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Minority Business Enterprises	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	No Disparity
Woman Business Enterprises	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>



CHAPTER 8: Subcontract Disparity Analysis

I. Introduction

The objective of this chapter is to determine if available Minority and Woman-owned Business Enterprise (M/WBE) subcontractors were underutilized in the award of Metropolitan Transit Authority of Harris County's (METRO) contracts during the October 1, 2013 to September 30, 2018 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 the market area of METRO. 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 which is less probable.²⁶² *Croson* states that an inference of discrimination can be made *prima facie* if the observed disparity is statistically significant. Under the *Croson* standard, non-minority male-owned businesses are not subjected to a statistical test of underutilization.²⁶³

II. Disparity Analysis

As detailed in *Chapter 4: Subcontractor Utilization Analysis*, extensive efforts were undertaken to obtain subcontractor records for METRO's construction and professional services contracts. The disparity analysis was performed on subcontracts issued October 1, 2013 to September 30, 2018.

The subcontract disparity findings in the two industries under consideration are detailed in *Section III*. The outcomes of the statistical analyses are presented in the "P-Value" column of the tables. A description of the statistical outcomes in the disparity tables are presented in Table 8.1.



²⁶² 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 statistical standard used in physical and social sciences, and is thus used in the present report to determine if an inference of discrimination can be made.

²⁶³ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

Table 8.1: Statistical Outcome Descriptions

P-Value Outcome	Definition of P-Value Outcome
< .05 *	This underutilization is statistically significant.
not significant	<ul style="list-style-type: none">• M/WBEs: This underutilization is not statistically significant.• Non-minority males: This overutilization is not statistically significant.
< .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.



III. Disparity Analysis: All Subcontracts by Industry

A. Construction Subcontracts

The disparity analysis of construction subcontracts is described below and shown in Table 8.2 and Chart 8.1.

African Americans represent 17.39% of the available construction businesses and received 5.03% of the construction subcontract dollars. This underutilization is statistically significant.

Asian-Pacific Americans represent 1.92% of the available construction businesses and received 0.40% of the construction subcontract dollars. This underutilization is not statistically significant.

Subcontinent Asian Americans represent 2.91% of the available construction businesses and received 1.37% of the construction subcontract dollars. This underutilization is not statistically significant.

Hispanic Americans represent 11.43% of the available construction businesses and received 26.71% of the construction subcontract dollars. This study does not test statistically the overutilization of minority and woman-owned businesses.

Native Americans represent 1.16% of the available construction businesses and received 0.00% of the construction subcontract dollars. While this group was underutilized, there were too few available firms to determine statistical significance.

Caucasian Females represent 10.98% of the available construction businesses and received 9.12% of the construction subcontract dollars. This underutilization is not statistically significant.

Non-minority Males represent 54.22% of the available construction businesses and received 57.37% of the construction subcontract dollars. This overutilization is not statistically significant.

Minority Business Enterprises represent 34.80% of the available construction businesses and received 33.51% of the construction subcontract dollars. This underutilization is not statistically significant.

Woman Business Enterprises represent 22.10% of the available construction businesses and received 13.77% of the construction subcontract dollars. This underutilization is not statistically significant.



**Table 8.2: Disparity Analysis: Construction Subcontracts,
October 1, 2013 to September 30, 2018**

Group	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American	5.03%	17.39%	\$769,882	\$2,660,181	-\$1,890,299	0.29	< .05 *
Asian-Pacific American	0.40%	1.92%	\$60,464	\$293,656	-\$233,192	0.21	not significant
Subcontinent Asian American	1.37%	2.91%	\$209,763	\$444,803	-\$235,040	0.47	not significant
Hispanic American	26.71%	11.43%	\$4,086,302	\$1,748,983	\$2,337,319	2.34	**
Native American	0.00%	1.16%	\$0	\$177,058	-\$177,058	0.00	----
Caucasian Females	9.12%	10.98%	\$1,396,043	\$1,679,887	-\$283,845	0.83	not significant
Non-minority Males	57.37%	54.22%	\$8,777,908	\$8,295,793	\$482,115	1.06	not significant
TOTAL	100.00%	100.00%	\$15,300,362	\$15,300,362			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	4.06%	6.29%	\$620,588	\$963,020	-\$342,432	0.64	not significant
African American Males	0.98%	11.09%	\$149,294	\$1,697,161	-\$1,547,867	0.09	< .05 *
Asian-Pacific American Females	0.39%	0.65%	\$59,324	\$99,325	-\$40,001	0.60	----
Asian-Pacific American Males	0.01%	1.27%	\$1,140	\$194,331	-\$193,191	0.01	not significant
Subcontinent Asian American Females	0.19%	0.99%	\$28,313	\$151,147	-\$122,834	0.19	----
Subcontinent Asian American Males	1.19%	1.92%	\$181,450	\$293,656	-\$112,206	0.62	not significant
Hispanic American Females	0.02%	2.79%	\$2,757	\$427,529	-\$424,772	0.01	< .05 *
Hispanic American Males	26.69%	8.64%	\$4,083,544	\$1,321,454	\$2,762,090	3.09	**
Native American Females	0.00%	0.40%	\$0	\$60,459	-\$60,459	0.00	----
Native American Males	0.00%	0.76%	\$0	\$116,599	-\$116,599	0.00	----
Caucasian Females	9.12%	10.98%	\$1,396,043	\$1,679,887	-\$283,845	0.83	not significant
Non-minority Males	57.37%	54.22%	\$8,777,908	\$8,295,793	\$482,115	1.06	not significant
TOTAL	100.00%	100.00%	\$15,300,362	\$15,300,362			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	33.51%	34.80%	\$5,126,411	\$5,324,681	-\$198,271	0.96	not significant
Woman Business Enterprises	13.77%	22.10%	\$2,107,025	\$3,381,367	-\$1,274,342	0.62	not significant

(*) denotes a statistically significant underutilization.

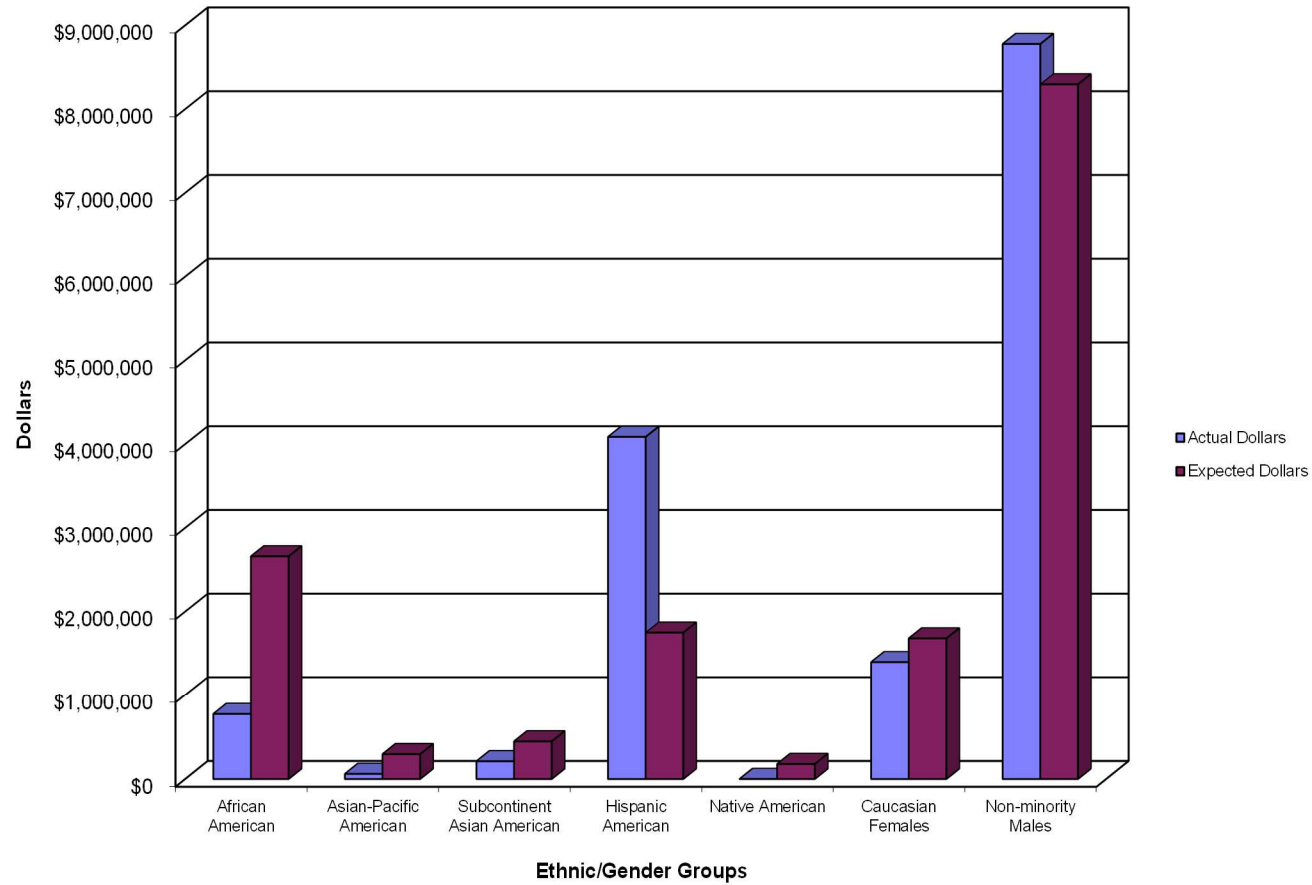
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 8.1: Disparity Analysis: Construction Subcontracts,
October 1, 2013 to September 30, 2018**



B. Professional Services Subcontracts

The disparity analysis of professional services subcontracts is described below and shown in Table 8.3 and Chart 8.2.

African Americans represent 19.08% of the available professional services businesses and received 4.78% of the professional services subcontract dollars. This underutilization is statistically significant.

Asian-Pacific Americans represent 2.12% of the available professional services businesses and received 4.53% of the professional services subcontract dollars. This study does not test statistically the overutilization of minority and woman-owned businesses.

Subcontinent Asian Americans represent 3.25% of the available professional services businesses and received 11.11% of the professional services subcontract dollars. This study does not test statistically the overutilization of minority and woman-owned businesses.

Hispanic Americans represent 10.92% of the available professional services businesses and received 8.11% of the professional services subcontract dollars. This underutilization is not statistically significant.

Native Americans represent 1.19% of the available professional services businesses and received 0.60% of the professional services subcontract dollars. This underutilization is not statistically significant.

Caucasian Females represent 11.78% of the available professional services businesses and received 3.55% of the professional services subcontract dollars. This underutilization is not statistically significant.

Non-minority Males represent 51.66% of the available construction businesses and received 67.32% of the professional services subcontract dollars. This overutilization is not statistically significant.

Minority Business Enterprises represent 36.56% of the available professional services businesses and received 29.12% of the professional services subcontract dollars. This underutilization is not statistically significant.

Woman Business Enterprises represent 24.59% of the available professional services businesses and received 13.93% of the professional services subcontract dollars. This underutilization is statistically significant.



**Table 8.3: Disparity Analysis: Professional Services Subcontracts,
October 1, 2013 to September 30, 2018**

Group	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American	4.78%	19.08%	\$529,954	\$2,116,885	-\$1,586,931	0.25	< .05 *
Asian-Pacific American	4.53%	2.12%	\$502,177	\$235,619	\$266,559	2.13	**
Subcontinent Asian American	11.11%	3.25%	\$1,232,914	\$360,791	\$872,123	3.42	**
Hispanic American	8.11%	10.92%	\$899,530	\$1,211,227	-\$311,696	0.74	not significant
Native American	0.60%	1.19%	\$67,099	\$132,535	-\$65,437	0.51	not significant
Caucasian Females	3.55%	11.78%	\$394,025	\$1,306,947	-\$912,922	0.30	not significant
Non-minority Males	67.32%	51.66%	\$7,470,462	\$5,732,158	\$1,738,304	1.30	not significant
TOTAL	100.00%	100.00%	\$11,096,161	\$11,096,161			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	0.96%	7.33%	\$106,645	\$813,620	-\$706,976	0.13	< .05 *
African American Males	3.81%	11.75%	\$423,309	\$1,303,265	-\$879,956	0.32	not significant
Asian-Pacific American Females	0.00%	0.66%	\$0	\$73,631	-\$73,631	0.00	---
Asian-Pacific American Males	4.53%	1.46%	\$502,177	\$161,988	\$340,189	3.10	**
Subcontinent Asian American Females	7.00%	1.13%	\$777,000	\$125,172	\$651,828	6.21	**
Subcontinent Asian American Males	4.11%	2.12%	\$455,914	\$235,619	\$220,295	1.93	**
Hispanic American Females	2.42%	3.28%	\$268,505	\$364,472	-\$95,967	0.74	not significant
Hispanic American Males	5.69%	7.63%	\$631,025	\$846,754	-\$215,729	0.75	not significant
Native American Females	0.00%	0.40%	\$0	\$44,178	-\$44,178	0.00	---
Native American Males	0.60%	0.80%	\$67,099	\$88,357	-\$21,258	0.76	---
Caucasian Females	3.55%	11.78%	\$394,025	\$1,306,947	-\$912,922	0.30	not significant
Non-minority Males	67.32%	51.66%	\$7,470,462	\$5,732,158	\$1,738,304	1.30	not significant
TOTAL	100.00%	100.00%	\$11,096,161	\$11,096,161			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	29.12%	36.56%	\$3,231,674	\$4,057,057	-\$825,383	0.80	not significant
Woman Business Enterprises	13.93%	24.59%	\$1,546,175	\$2,728,021	-\$1,181,847	0.57	< .05 *

(*) denotes a statistically significant underutilization.

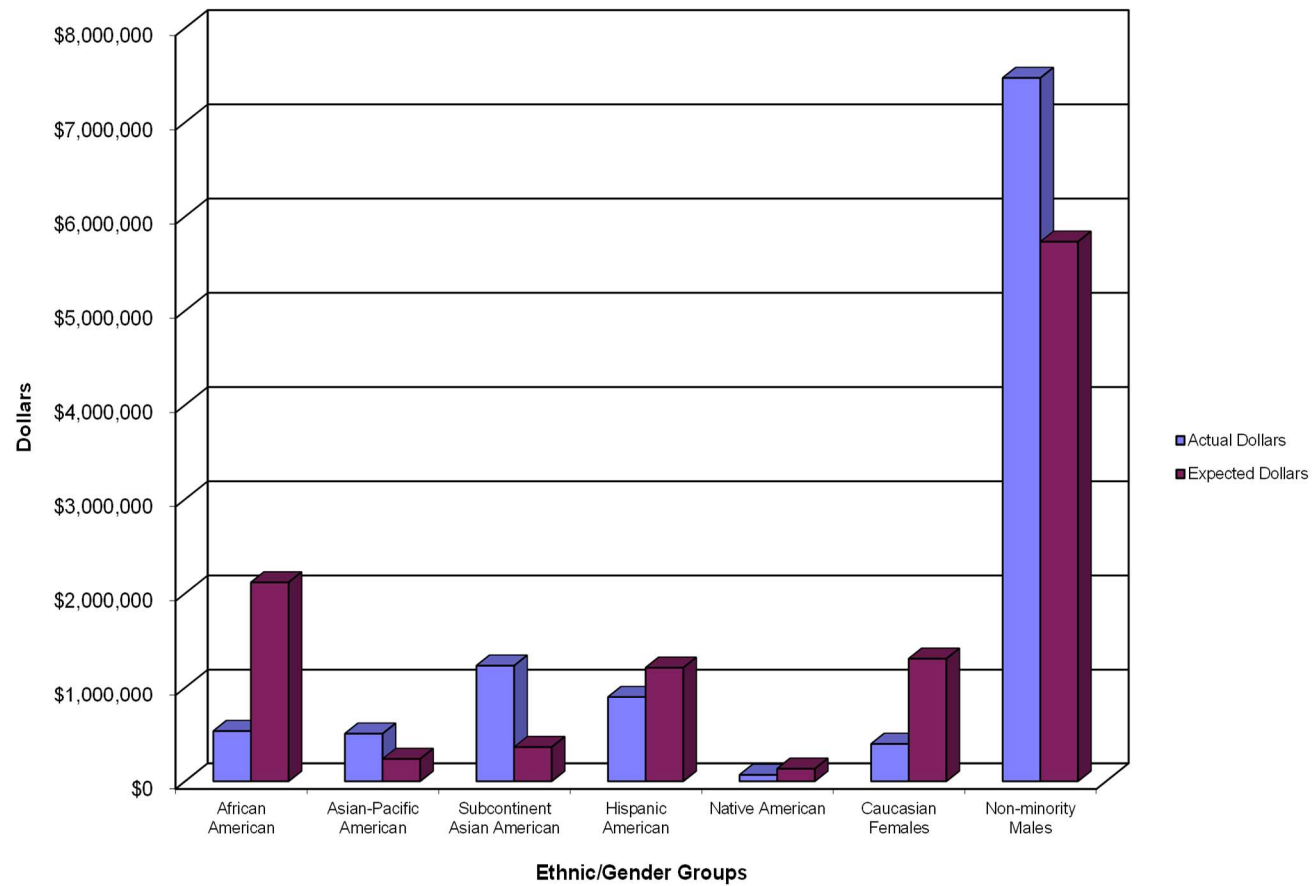
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(---) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



**Chart 8.2: Disparity Analysis: Professional Services Subcontracts,
October 1, 2013 to September 30, 2018**



IV. Subcontract Disparity Summary

As indicated in Table 8.4, disparity was found for African American subcontractors on construction contracts. Disparity was also found for African American and woman-owned businesses on professional services subcontracts.

**Table 8.4: Subcontract Disparity Summary,
October 1, 2013 to September 30, 2018**

Ethnicity/Gender	Construction	Professional Services
African Americans	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	No Disparity	No Disparity
Subcontinent Asian Americans	No Disparity	No Disparity
Hispanic Americans	No Disparity	No Disparity
Native Americans	No Disparity	No Disparity
Caucasian Females	Underutilized	Underutilized
Minority Business Enterprises	No Disparity	No Disparity
Woman Business Enterprises	Underutilized	<i>Disparity</i>



CHAPTER 9: Regression Analysis

I. Introduction

Private sector business practices that are not subject to government Minority and Woman-owned Business Enterprise (M/WBE) (hereinafter referred to as Minority and Caucasian female Business Enterprise) requirements are indicators of marketplace conditions that could adversely affect the formation and growth of M/WBEs. The adverse marketplace conditions thereby could depress the current availability of M/WBEs. *Concrete Works of Colorado v. City and County of Denver (Concrete Works III)*²⁶⁴ sets forth a framework for considering a passive participant model for an analysis of discrimination in private sector business practices. In accordance with *Concrete Works III*, regression analyses were conducted to examine two outcome variables—business ownership rates and business earnings—to determine whether the Metropolitan Transit Authority of Harris County, Texas (METRO) is passively participating in ethnic and gender discrimination. These two regression analyses examined possible impediments to M/WBE business ownership, as well as factors affecting its business earnings. Further details are provided in the current chapter under *Section IV: Datasets Analyzed*.

Each regression analysis compared minority group members²⁶⁵ and Caucasian females to non-minority male-owned business enterprises by controlling for race and gender-neutral explanatory variables, such as age, education, marital status, and access to capital. The impact of the explanatory variables on the outcome variables is described in this chapter. These findings elucidate the socioeconomic conditions in the METRO's market area that could adversely affect the measuring of relative availability of M/WBEs and non-M/WBEs. Statistically significant findings for lower M/WBE business earnings and lower likelihoods of minority and Caucasian female business ownership could indicate patterns of discrimination that might result in disproportionately smaller numbers of willing and capable M/WBEs.

The United States Census Public Use Microdata Sample (PUMS) dataset was used to compare the probability of a minority male, minority female, or Caucasian female owning a business to the probability of a non-minority male owning a business. A logistic regression was used to determine if race and gender have a statistically significant effect on the probability of business ownership. The PUMS data were also used to compare the business earnings of M/WBEs to non-minority male-owned businesses. An Ordinary Least Squares (OLS) regression was utilized to analyze the PUMS data for disparities in owner-reported incomes when controlling for race and gender-neutral factors.



²⁶⁴ *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*").

²⁶⁵ Minority group members include both males and females.

The applicable limits of the private sector discrimination findings are set forth in *Builders Association of Greater Chicago v. City of Chicago*²⁶⁶ (*City of Chicago*), in which 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, caution must be exercised in the interpretation and application of the regression findings. Case law regarding the application of private sector discrimination is discussed below in detail.

II. Legal Analysis

A. Passive Discrimination

The controlling legal precedent set forth in the 1989 *City of Richmond v. J.A. Croson Co.*²⁶⁷ decision authorized state and local governments to remedy discrimination in the awarding of subcontracts by its prime contractors on the grounds that the government cannot be a “passive participant” in such discrimination. In January 2003, *Concrete Works IV*²⁶⁸ and *City of Chicago*²⁶⁹ extended the private sector analysis to the investigation of discriminatory barriers that M/WBEs encountered in the formation and development of businesses and their consequence for 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 Court 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.²⁷⁰ However, the appropriateness of the City’s remedy, given the finding of private sector discrimination, was not at issue before the court. The question before the court was whether sufficient facts existed to determine if the private sector business practices under consideration constituted discrimination. For technical legal reasons,²⁷¹ the court did not examine whether a consequent public sector remedy, i.e., one involving a goal requirement on the City of Denver’s contracts, was “narrowly tailored” or otherwise supported by the City’s private sector findings of discrimination.

²⁶⁶ *Builders Ass’n of Greater Chicago v. Chicago*, 298 F. Supp. 2d 725 (N.D. Ill. 2003).

²⁶⁷ 488 U.S. 469 (1989).

²⁶⁸ *Concrete Works of Colo., Inc. v. Denver*, 321 F.3d 950, 965-69 (10th Cir. 2003) (“*Concrete Works IV*”).

²⁶⁹ *City of Chicago*, 298 F. Supp. 2d at 738-39.

²⁷⁰ *Concrete Works IV*, 321 F.3d at 966-67.

²⁷¹ Plaintiff had not preserved the issue on appeal. Therefore, it was no longer part of the case.



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*. *City of Chicago*, decided ten months after *Concrete Works IV*, found that certain private sector business practices constituted discrimination against minorities in the Chicago market area. However, the district court did not find City of Chicago's M/WBE subcontracting goal to be a remedy "narrowly tailored" to address the documented private sector discriminatory business practices that had been discovered within the City's market area.²⁷² The court explicitly stated that certain discriminatory business practices documented by regression analyses constituted private sector discrimination.²⁷³ 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 City of Chicago's market area was documented, the court determined that the evidence was insufficient to support the city's race-based subcontracting goals.²⁷⁴ The court ordered an injunction to invalidate City of Chicago's race-based program.²⁷⁵

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 nor 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.²⁷⁶

Given these distortions of the market and these barriers, is 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

²⁷² *City of Chicago*, 298 F. Supp. 2d at 739.

²⁷³ *Id.* at 731-32.

²⁷⁴ *Id.* at 742.

²⁷⁵ *Id.*

²⁷⁶ *Id.* at 734-35.



waivers' is of particular importance . . . a 'rigid numerical quota' particularly disserves the cause of narrow tailoring."²⁷⁷ The City's program is "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.²⁷⁸

C. Conclusion

As established in *City of Chicago*, private sector discrimination cannot be used as the factual basis for a government-sponsored, race-based M/WBE program without a nexus to the government's actions. Therefore, the discrimination that might be revealed in the regression analysis is not a sufficient factual predicate for the METRO to establish a race-based M/WBE program unless a nexus is established between the METRO and the private sector data. These economic indicators, albeit not a measure of passive discrimination, are illustrative of private sector discrimination and can support the METRO-sponsored, race-neutral programs.

III. Regression Analysis Methodology

A regression analysis is the methodology employed to ascertain whether there are private sector economic indicators of discrimination in the METRO's market area that could impact the formation and development of M/WBEs. The two regression analyses focus on the construction, professional services (including architecture and engineering), and goods and services industries. The datasets used for the regression analyses did not allow for an exact match of the industries used in the METRO's Disparity Study (Study). Therefore, the three industries were selected to most closely mirror the industries used in the METRO's Study.

As noted, two separate regression analyses were conducted. They are the Business Ownership Analysis and the Earnings Disparity Analysis. Both analyses take into consideration race and gender-neutral factors, such as age, education, and creditworthiness in assessing whether the explanatory factors examined are disproportionately affecting minorities and females when compared to similarly situated non-minority males.

IV. Datasets Analyzed

The 2013 through 2017 PUMS dataset produced by the United States Census Bureau was used to analyze business ownership and earnings disparities within the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area (MSA), Texas. The 2013 through 2017 PUMS dataset represented the most recent data that most closely matched the October 1, 2013 to September 31, 2018 study period. The data for the Houston-The Woodlands-Sugar Land MSA was identified using Public Use Microdata Areas (PUMA), a variable within the PUMS dataset that reports data for counties and cities within states. The dataset includes information on personal profile, industry,

²⁷⁷ *Adarand Constructors v. Slater, supra*, at 1177.

²⁷⁸ *City of Chicago*, 298 F.Supp.2d at 739-40.



work characteristics, and family structure. The PUMS data allowed for an analysis by an individual's race and gender.

The 2011 KFS dataset was considered to examine business loan approval rates. These data represent the most recent information available on access to credit and contain observations for business and business owner characteristics, including the business owner's credit and resources and the business's credit and financial health. While the KFS data are available by Census Division, the data for the South Region containing the Houston-The Woodlands-Sugar Land MSA, Texas was utilized. It should be noted that the ethnicity and gender of the responding businesses were categorized based on the ownership percentages of the majority owners. There were many businesses that refused to respond with the business loan approval rate they received or responded that they do not know in the KFS dataset. In the case, it is assumed that the business is sometimes approved and sometimes denied a loan. Table 9.1 lists the percentage of Caucasian males and M/WBEs by industry and their response to whether they were always, sometimes, or never approved for a business loan.

Table 9.1: Non-minority Male and M/WBE Loan Approval

Loan Variable	Non-minority Male	Caucasian Female	Minority
South Region, Construction			
Always Denied	5.56%	2.86%	0.00%
Sometimes Approved/ Sometimes Denied	83.33%	85.71%	93.33%
Always Approved	11.11%	11.43%	6.67%
South Region, Professional Services			
Always Denied	0.00%	0.87%	2.63%
Sometimes Approved/ Sometimes Denied	98.15%	91.30%	93.42%
Always Approved	1.85%	7.83%	3.95%
South Region, Goods and Services			
Always Denied	0.00%	1.69%	3.85%
Sometimes Approved/ Sometimes Denied	97.62%	91.53%	96.15%
Always Approved	2.38%	6.78%	0.00%

In the construction industry, 11.43% of Caucasian females and 6.67% of minorities were always approved for a loan, and 2.86% of Caucasian females and 0.00% of minorities were always denied a loan. In the professional services industry, 7.83% of Caucasian females and 3.95% of minorities were always approved for a loan, while 0.87% of Caucasian females and 2.63% of minorities were always denied a loan. In the goods and services industry, 6.78% of Caucasian females and 0.00% of minorities were always approved for a loan, while 1.69% of Caucasian females and 3.85% of minorities were always denied a loan.



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. Business ownership, the dependent variable, includes business owners of incorporated and non-incorporated firms. The business ownership variable utilizes two binary values. A value of “1” indicates that a person is a business owner, whereas a value of “0” indicates that a person is not a business owner. In this case, a logistic regression model is utilized to predict the likelihood of business ownership using independent socioeconomic variables. Three logistic models are run to predict the probability of business ownership in each of the three industries examined in the METRO’s Study. Categories of the independent variables analyzed include educational level, citizenship status, personal characteristics, and race/gender.

In the table below, a finding of disparity is denoted by an asterisk (*) when the independent variable is significant at or above the 95% confidence level. A finding of disparity indicates that there is a non-random relationship between the probability of owning a business and the independent variable. Tables of regression results 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 variable and the independent variable. 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 variable and the independent variable. For instance, an individual with children under the age of 6 has a lower likelihood of owning a business, holding all other variables constant.

For each of the three 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.²⁷⁹ Table 9.2 presents the independent variables used for the Business Ownership Analysis.



²⁷⁹ The terms “business owner” and “self-employed” are used interchangeably throughout the chapter.

Table 9.2: Independent Variables Used in the Business Ownership Analysis

Personal Characteristics	Educational Attainment	Race	Gender
1. Age 2. Age Squared 3. Home Ownership 4. Home Value 5. Monthly Mortgage Payments 6. Interest and Dividends 7. Speaks English at Home 8. Children Under the Age of Six in the Household 9. Marital Status	10. Bachelor's Degree 11. Advanced Degree	12. Caucasian American 13. African American 14. Asian Pacific American 15. Subcontinental Asian American 16. Hispanic American 17. Native American 18. Other Minority Group ²⁸⁰	19. Female

B. The Earnings Disparity Analysis

The Earnings Disparity 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 Ordinary Least Squares (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 the table below, a finding of disparity is denoted by an asterisk (*) when an independent variable is significant at or above the 95% confidence level. A finding of disparity indicates that there is a non-random relationship between wages and the independent variable. If the coefficient sign is positive, it means there is a positive relationship between the dependent variable and the independent variable. If the coefficient sign for the independent variable is negative, this implies an inverse relationship between the dependent variable and the independent variable.



²⁸⁰ Other Minority includes individuals who belong to two or more racial groups.

An OLS regression analysis is used to assess the presence of business earning disparities. OLS regressions have been conducted separately for each industry. Table 9.3 presents the independent variables used for the Earnings Disparity Analysis.²⁸¹

Table 9.3: Independent Variables Used for the Earnings Disparity Analysis

Personal Characteristics	Educational Attainment	Race	Gender
1. Age	11. Bachelor's Degree	13. Caucasian American	20. Female
2. Age Squared	12. Advanced Degree	14. African American	
3. Incorporated Business		15. Asian Pacific American	
4. Home Ownership		16. Subcontinental Asian American	
5. Home Value		17. Hispanic American	
6. Monthly Mortgage Payments		18. Native American	
7. Interest and Dividends		19. Other Minority Group	
8. Speaks English at Home			
9. Children Under the Age of Six in the Household			
10. Marital Status			

VI. Findings

A. Business Ownership Analysis

The business ownership variable is defined by the number of self-employed individuals in each of the three industries. The analysis considered incorporated and non-incorporated businesses. The data in this section come from the Houston-The Woodlands-Sugar Land MSA, which was specified using PUMA, a variable within the PUMS dataset that can specify the different counties and cities within states.²⁸² As noted in Section IV, because each PUMA is determined by the United States Census, the region analyzed in the regression analyses can be limited to the counties and cities in the Houston-The Woodlands-Sugar Land MSA, Texas.

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. The purpose of this model is to determine whether 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

²⁸¹ If an independent variable is a binary variable, it will be coded as “1” if the individual has that variable present and “0” if otherwise (i.e. for the Hispanic American variable, it is coded as “1” if the individual is Hispanic American and “0” if otherwise). If an independent variable is a continuous variable, a value will be used (i.e. one’s age can be labeled as 35).

²⁸² 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.



and gender-neutral may, in fact, 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 multiple ways. First, Caucasian females may have statistically significant lower business ownership rates, so they face a direct disadvantage as 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 9.4 presents the logistic regression results for the likelihood of owning a business in the construction industry based on the 22 variables analyzed in this model.

Table 9.4: Construction Industry Logistic Model

Business Ownership Model	Coefficient	Significance	Standard Error	Z-score	P> z
Age	0.126971	*	0.016207	7.83	0.000
Age-squared	-0.001050	*	0.000174	-6.04	0.000
Bachelor's Degree (a)	-0.261463	*	0.117717	-2.22	0.026
Advanced Degree	-0.304151		0.275038	-1.11	0.269
Home Owner	0.129709		0.087311	1.49	0.137
Home Value	0.000001	*	0.000000	5.03	0.000
Monthly Mortgage Payment	-0.000196	*	0.000059	-3.35	0.001
Interest and Dividends	0.000003		0.000002	1.13	0.261
Speaks English at Home	-0.137507		0.146289	-0.94	0.347
Has a Child under the Age of Six	-0.056348		0.324461	-0.17	0.862
Married	-0.106339		0.076603	-1.39	0.165
Caucasian Female (b)	-0.905828	*	0.164747	-5.50	0.000
African American	-0.707613	*	0.164641	-4.30	0.000
Asian Pacific American	-0.053921		0.268986	-0.20	0.841
Subcontinental Asian American	-0.418327		0.453571	-0.92	0.356
Hispanic American	-0.287635		0.154718	-1.86	0.063
Native American	0.125042		0.669700	0.19	0.852
Other Minority	-0.033417		0.501818	-0.07	0.947
Year 2014 (c)	0.011498		0.099941	0.12	0.908
Year 2015	0.102284		0.100471	1.02	0.309
Year 2016	0.034954		0.098095	0.36	0.722
Year 2017	0.075118		0.247645	0.30	0.762
Constant	-4.607297	*	0.401679	-11.47	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(*) denotes a statistically significant variable with 95% confidence.



The construction industry logistic regression results indicate the following:

- 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.²⁸³ However, as individuals reach advanced age, the likelihood of being a business owner significantly decreases.
- Individuals with a bachelor's degree are significantly less likely to be business owners in the construction industry.
- Individuals who have a higher-valued home are significantly more likely to be business owners in the construction industry.
- Individuals who make higher mortgage payments are significantly less likely to be business owners in the construction industry.
- Caucasian females and African Americans are significantly less likely than non-minority males to be business owners in the construction industry.

2. Logistic Model Results for Professional Services Business Ownership

Table 9.5 presents the logistic regression results for the likelihood of owning a business in the professional services industry based on the 22 variables analyzed in this model.

Table 9.5: Professional Services Industry Logistic Model

Business Ownership Model	Coefficient	Significance	Standard Error	Z-score	P> z
Age	0.092867	*	0.017044	5.45	0.000
Age-squared	-0.000451	*	0.000160	-2.82	0.005
Bachelor's Degree (a)	0.129586		0.091839	1.41	0.158
Advanced Degree	0.624172	*	0.101005	6.18	0.000
Home Owner	0.074138		0.111007	0.67	0.504
Home Value	0.000000	*	0.000000	5.30	0.000
Monthly Mortgage Payment	0.000045		0.000039	1.16	0.245
Interest and Dividends	0.000003	*	0.000001	2.59	0.010
Speaks English at Home	0.043606		0.114564	0.38	0.703
Has a Child under the Age of Six	0.200098		0.165828	1.21	0.228
Married	0.068826		0.081440	0.85	0.398
Caucasian Female (b)	-0.007844		0.084128	-0.09	0.926
African American	-0.154803		0.140190	-1.10	0.269
Asian Pacific American	-0.674231	*	0.187015	-3.61	0.000
Subcontinental Asian American	-0.453991	*	0.218675	-2.08	0.038
Hispanic American	0.006463		0.143181	0.05	0.964
Native American	-1.428655		1.067208	-1.34	0.181
Other Minority	0.276066		0.268373	1.03	0.304
Year 2014 (c)	-0.204372	*	0.096421	-2.12	0.034
Year 2015	-0.100427		0.098320	-1.02	0.307
Year 2016	-0.005560		0.093812	-0.06	0.953

²⁸³ Throughout this chapter, significance refers to statistical significance.



Business Ownership Model	Coefficient	Significance	Standard Error	Z-score	P> z
Year 2017	-0.121936		0.228326	-0.53	0.593
Constant	-5.349168	*	0.459464	-11.64	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(*) denotes a statistically significant variable with 95% confidence.

The professional services industry logistic regression results indicate the following:

- The likelihood of professional services business ownership is positively associated with increased age; older individuals are significantly more likely to be business owners in the professional services industry. However, as individuals reach advanced age, the likelihood of being a business owner significantly decreases.
- Having an advanced degree significantly increases the likelihood of being a business owner in the professional services industry.
- Individuals who have a higher-valued home are significantly more likely to be business owners in the professional services industry.
- Individuals who have higher interest and dividends income are significantly more likely to be business owners in the professional services industry.
- Asian Pacific Americans and Subcontinental Asian Americans are significantly less likely to be business owners than non-minority males in the professional services industry.
- Individuals were significantly less likely to be business owners in the year 2014 in the professional services industry.

3. Logistic Model Results for Goods and Services Business Ownership

Table 9.6 presents the logistic regression results for the likelihood of owning a business in the goods and services industry based on the 22 variables analyzed in this model.

Table 9.6: Goods and Services Industry Logistic Model

Business Ownership Model	Coefficient	Significance	Standard Error	Z-score	P> z
Age	0.087191	*	0.014831	5.88	0.000
Age-squared	-0.000668	*	0.000158	-4.24	0.000
Bachelor's Degree (a)	-0.255227	*	0.099763	-2.56	0.011
Advanced Degree	-0.132246		0.187941	-0.70	0.482
Home Owner	0.260324	*	0.080690	3.23	0.001
Home Value	0.000000	*	0.000000	2.69	0.007
Monthly Mortgage Payment	-0.000098		0.000061	-1.59	0.111
Interest and Dividends	0.000003	*	0.000002	2.01	0.045
Speaks English at Home	-0.175920		0.117200	-1.50	0.133
Has a Child under the Age of Six	0.036757		0.185012	0.20	0.843
Married	0.137097		0.074780	1.83	0.067



Business Ownership Model	Coefficient	Significance	Standard Error	Z-score	P> z
Caucasian Female (b)	-0.318883	*	0.129960	-2.45	0.014
African American	-0.034001		0.120651	-0.28	0.778
Asian Pacific American	0.080946		0.231663	0.35	0.727
Subcontinental Asian American	-0.186707		0.393575	-0.47	0.635
Hispanic American	0.222252		0.129862	1.71	0.087
Native American	-0.534425		0.824079	-0.65	0.517
Other Minority	0.229677		0.326692	0.70	0.482
Year 2014 (c)	-0.207301	*	0.096299	-2.15	0.031
Year 2015	-0.249024	*	0.100328	-2.48	0.013
Year 2016	0.042883		0.094699	0.45	0.651
Year 2017	0.195483		0.239877	0.81	0.415
Constant	-4.110928	*	0.354896	-11.58	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(P>|z|) of less than 0.05 denotes findings of statistical significance.

(*) denotes a statistically significant variable with 95% confidence.

The goods and services industry logistic regression results indicate the following:

- The likelihood of goods and services business ownership is positively associated with increased age; older individuals are significantly more likely to be business owners in the goods and services industry. However, as individuals reach advanced age, the likelihood of being a business owner significantly decreases.
- Individuals with a bachelor's degree are significantly less likely to be business owners in the goods and services industry.
- Individuals who own a home are significantly more likely to be business owners in the goods and services industry.
- Individuals who have a higher-valued home are significantly more likely to be business owners in the goods and services industry.
- Individuals who have higher interest and dividends income are significantly more likely to be business owners in the goods and services industry.
- Caucasian females are significantly less likely than non-minority males to be business owners in the goods and services industry.
- Individuals were significantly less likely to be business owners in the years 2014 and 2015 in the goods and services industry.

B. Business Ownership Analysis Conclusion



The Business Ownership Analysis examined the different explanatory variables' impact on an individual's likelihood of owning a business in the construction, professional services, and goods and services 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 exist for minorities and Caucasian females when compared to similarly situated non-minority males.

Caucasian females experience the greatest disparity, as they are significantly less likely to own a business in the construction and goods and services industries than similarly situated non-minority males. Asian Americans are also significantly less likely to own a business in the construction industry. Asian Pacific Americans and Subcontinental Asian Americans are significantly less likely to own a business in the professional services industry. Table 9.7 shows the business ownership regression analysis matrix by race, gender, and industry.

Table 9.7: Statistically Significant Business Ownership Disparities

Race/Gender	Construction	Professional Services	Goods and Services
Caucasian Female	SIGNIFICANT	NOT SIGNIFICANT	SIGNIFICANT
African American	SIGNIFICANT	NOT SIGNIFICANT	NOT SIGNIFICANT
Asian Pacific American	NOT SIGNIFICANT	SIGNIFICANT	NOT SIGNIFICANT
Subcontinental Asian American	NOT SIGNIFICANT	SIGNIFICANT	NOT SIGNIFICANT
Hispanic American	NOT SIGNIFICANT	NOT SIGNIFICANT	NOT SIGNIFICANT
Native American	NOT SIGNIFICANT	NOT SIGNIFICANT	NOT SIGNIFICANT
Other Minority	NOT SIGNIFICANT	NOT SIGNIFICANT	NOT SIGNIFICANT

C. Business Earnings Analysis

The business earnings variable is identified by self-employment income²⁸⁴ from the year 2013 to 2017 for the three industries: construction, professional services, and goods and services. The analysis considered incorporated and non-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 whether observed race or gender disparities were independent of the race and gender-neutral factors known to be associated with self-employment income.

1. OLS Regression Results in the Construction Industry

Table 9.8 shows the results of the OLS regression for business earnings in the construction industry based on the 23 variables analyzed in this model.



²⁸⁴ The terms “business earnings” and “self-employment income” are used interchangeably.

Table 9.8: Construction Industry OLS Regression

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	1374.856	*	278.151	4.94	0.000
Age-squared	-10.017	*	3.519	-2.85	0.004
Incorporated Business	-1924.367		3765.682	-0.51	0.609
Bachelor's Degree (a)	21221.630	*	2275.270	9.33	0.000
Advanced Degree	58651.430	*	7049.247	8.32	0.000
Home Owner	2207.676		1512.090	1.46	0.144
Home Value	0.044	*	0.009	4.78	0.000
Monthly Mortgage Payment	7.906	*	1.471	5.37	0.000
Interest and Dividends	0.310	*	0.151	2.05	0.040
Speaks English at Home	7613.915	*	1788.555	4.26	0.000
Has a Child under the Age of Six	-9189.424	*	3917.707	-2.35	0.019
Married	7479.368	*	1031.826	7.25	0.000
Caucasian Female (b)	-25690.330	*	2558.792	-10.04	0.000
African American	-21181.340	*	2644.580	-8.01	0.000
Asian Pacific American	-12777.460	*	4804.796	-2.66	0.008
Subcontinental Asian American	-10179.470		10928.480	-0.93	0.352
Hispanic American	-19148.080	*	2204.840	-8.68	0.000
Native American	-23566.840	*	10528.520	-2.24	0.025
Other Minority	-18626.200	*	5161.067	-3.61	0.000
Year 2014 (c)	683.159		1428.413	0.48	0.632
Year 2015	2714.146	*	1361.254	1.99	0.046
Year 2016	1273.814		1301.621	0.98	0.328
Year 2017	-1830.357		4395.874	-0.42	0.677
Constant	575.796		5511.897	0.10	0.917

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(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 industry indicate the following:

- Older business owners have significantly higher business earnings in the construction industry. However, as business owners reach advanced 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 with a higher-valued home have significantly higher business earnings in the construction industry.
- Business owners who make higher monthly mortgage payments have significantly higher business earnings in the construction industry.
- Business owners with higher interest and dividend income have significantly higher business earnings in the construction industry.
- Business owners who speak English at home have significantly higher business earnings in the construction industry.
- Business owners who have a child under the age of six have significantly lower business earnings in the construction industry.
- Married business owners have significantly higher business earnings in the construction industry.
- Caucasian females, African Americans, Asian Pacific Americans, Hispanic Americans, Native Americans, and other minority business owners have significantly lower business earnings than non-minority males in the construction industry.
- Business owners had significantly higher business earnings in the year 2015 in the construction industry.

2. OLS Regression Results in the Professional Services Industry

Table 9.9 shows the results of the OLS regression for business earnings in the professional services industry based on the 23 variables analyzed in this model.

Table 9.9: Professional Services Industry OLS Regression

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	6249.672	*	417.412	14.97	0.000
Age-squared	-58.321	*	4.849	-12.03	0.000
Incorporated Business	6656.879		6906.859	0.96	0.335
Bachelor's Degree (a)	24764.130	*	1927.112	12.85	0.000
Advanced Degree	51149.140	*	3073.846	16.64	0.000
Home Owner	-967.851		2389.604	-0.41	0.685
Home Value	0.067	*	0.007	9.97	0.000
Monthly Mortgage Payment	10.945	*	1.643	6.66	0.000
Interest and Dividends	0.250	*	0.105	2.37	0.018
Speaks English at Home	3344.885		2729.717	1.23	0.220
Has a Child under the Age of Six	-7221.764	*	2923.584	-2.47	0.014
Married	6701.420	*	2068.094	3.24	0.001
Caucasian Female (b)	-39259.590	*	2719.001	-14.44	0.000
African American	-33663.440	*	3155.581	-10.67	0.000
Asian Pacific American	-33948.900	*	4200.051	-8.08	0.000
Subcontinental Asian American	-24105.510	*	4312.684	-5.59	0.000
Hispanic American	-28902.910	*	3311.258	-8.73	0.000
Native American	-38421.730	*	7427.651	-5.17	0.000

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Other Minority	-34626.950	*	7403.360	-4.68	0.000
Year 2014 (c)	2522.282		2813.791	0.90	0.370
Year 2015	-112.482		2691.715	-0.04	0.967
Year 2016	-2065.844		2675.603	-0.77	0.440
Year 2017	3003.470		7116.922	0.42	0.673
Constant	-95229.770	*	8466.088	-11.25	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(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 professional services industry indicate the following:

- Older business owners have significantly higher business earnings in the professional services industry. However, as business owners reach advanced age, they have significantly lower business earnings in the professional services industry.
- Business owners with a bachelor's degree or an advanced degree have significantly higher business earnings in the professional services industry.
- Business owners with higher-valued home have significantly higher business earnings in the professional services industry.
- Business owners who make higher monthly mortgage payments have significantly higher business earnings in the professional services industry.
- Business owners with higher interest and dividend income have significantly higher business earnings in the professional services industry.
- Business owners who have a child under the age of six have significantly lower business earnings in the professional services industry.
- Married business owners have significantly higher business earnings in the professional services industry.
- Caucasian females, African Americans, Asian Pacific Americans, Subcontinental Asian Americans, Hispanic Americans, Native Americans, and other minority business owners have significantly lower business earnings than non-minority males in the professional services industry.

3. OLS Regression Results in the Goods and Services Industry

Table 9.10 shows the results of the OLS regression for business earnings in the goods and services industry based on the 23 variables analyzed in this model.



Table 9.10: Goods and Services Industry OLS Regression

Business Earnings Model	Coefficient	Significance	Standard Error	t-value	P> t
Age	2991.404	*	201.454	14.85	0.000
Age-squared	-30.123	*	2.470	-12.20	0.000
Incorporated Business	3277.108		3553.161	0.92	0.356
Bachelor's Degree (a)	21220.210	*	2157.170	9.84	0.000
Advanced Degree	48869.550	*	6534.365	7.48	0.000
Home Owner	438.978		1764.221	0.25	0.804
Home Value	0.050	*	0.010	4.92	0.000
Monthly Mortgage Payment	9.648	*	1.449	6.66	0.000
Interest and Dividends	0.275		0.153	1.80	0.072
Speaks English at Home	6442.028	*	1642.697	3.92	0.000
Has a Child under the Age of Six	-8015.546	*	1509.786	-5.31	0.000
Married	7928.594	*	1060.367	7.48	0.000
Caucasian Female (b)	-18398.790	*	2512.510	-7.32	0.000
African American	-19489.000	*	1886.871	-10.33	0.000
Asian Pacific American	-17119.220	*	3798.395	-4.51	0.000
Subcontinental Asian American	-24215.200	*	6690.637	-3.62	0.000
Hispanic American	-13744.660	*	2069.346	-6.64	0.000
Native American	-1697.388		11070.770	-0.15	0.878
Other Minority	-13152.910		6945.826	-1.89	0.058
Year 2014 (c)	1576.216		1643.242	0.96	0.337
Year 2015	494.399		1641.765	0.30	0.763
Year 2016	1017.529		1630.506	0.62	0.533
Year 2017	4998.335		4370.446	1.14	0.253
Constant	-39305.880	*	4446.662	-8.84	0.000

(a) For the variables bachelor's degree and advanced degree, the baseline variable is high school.

(b) For the ethnicity variables, the baseline variable is Caucasian males.

(c) For the year variables, the baseline variable is year 2013.

(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 goods and services industry indicate the following:

- Older business owners have significantly higher business earnings in the goods and services industry. However, as business owners reach advanced age, they have significantly lower business earnings in the goods and services industry.
- Business owners with a bachelor's degree or an advanced degree have significantly higher business earnings in the goods and services industry.
- Business owners with a higher-valued home have significantly higher business earnings in the goods and services industry.
- Business owners who make higher monthly mortgage payments have significantly higher business earnings in the goods and services industry.



- Business owners who speak English at home have significantly higher business earnings in the goods and services industry.
- Business owners who have a child under the age of six have significantly lower business earnings in the goods and services industry.
- Married business owners have significantly higher business earnings in the goods and services industry.
- Caucasian females, African Americans, Asian Pacific Americans, Subcontinental Asian Americans, and Hispanic American business owners have significantly lower business earnings than non-minority males in the goods and services industry.

D. Business Earnings Analysis Conclusion

Controlling for race and gender-neutral factors, the Business Earnings Analysis documented statistically significant disparities in business earnings for minorities and Caucasian females when compared to similarly situated non-minority males. Caucasian females, African Americans, Asian Pacific Americans, and Hispanic American business owners experience the greatest disparity, as they have significantly lower business earnings in the construction, professional services, and goods and services industries than similarly situated non-minority males. Native Americans and other minorities have significantly lower business earnings in the construction and professional services industries. Subcontinental Asian Americans have significantly lower business earnings in the professional services and goods and services industries. Table 9.11 shows the earnings disparity regression results by race, gender, and industry.

Table 9.11: Statistically Significant Business Earnings Disparities

Race/Gender	Construction	Professional Services	Goods and Services
Caucasian Female	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>
African American	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>
Asian Pacific American	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>
Subcontinental Asian American	NOT SIGNIFICANT	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>
Hispanic American	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>
Native American	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	NOT SIGNIFICANT
Other Minority	<i>SIGNIFICANT</i>	<i>SIGNIFICANT</i>	NOT SIGNIFICANT

VII. Conclusion

Two regression analyses were conducted to determine whether 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 identified in the Disparity Study. It is important to note that there are limitations to using the regression findings to determine disparity. The findings cannot be used as the factual basis for a government-sponsored, race-conscious M/WBE program, no matter how discriminatory the private sector may be. Therefore, caution must be exercised in the interpretation and application of the regression findings in a disparity study. Nevertheless, the findings can be used to enhance the race-neutral recommendations to eliminate identified statistically significant disparities in the METRO's use of available M/WBEs.



The two analyses examined the following outcome variables: business ownership and business earnings. These analyses were performed for the three industries—construction, professional services, and goods and services—included in the METRO’s Disparity Study. The regression analyses examined the effect of race and gender on the two dependent variables. The Business Ownership Analysis and the Earnings Disparity Analysis used data from the 2013 through 2017 PUMS datasets for the METRO and compared business ownership rates and earnings for M/WBEs to those of similarly situated non-minority males.

The analysis of the two dependent variables document disparities that could adversely affect the formation and growth of M/WBEs within the construction, professional services, and goods and services industries. Based on the statistical analysis performed, lower business ownership and business earning are significantly correlated with race and gender for select groups. Racial and gender discrimination, as found in the analysis of business ownership and earning, is likely a manifestation of economic conditions in the private sector that impede minorities and Caucasian females’ efforts to own, expand, and sustain businesses. 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.

Other factors such as old age (age-squared) and having a child under the age of six consistently have negative correlations with earnings. This is likely the result of older individuals seeking retirement and relying on fixed income or simply working less, rather than being actively engaged in generating higher income. Additionally, individuals with a child under six are likely younger and have a company in its infancy.

An interesting finding from the analysis shows that construction and goods and services company ownership is negatively correlated with earning a bachelor’s degree. This likely stems from the fact that higher education is not a barrier to entry for owning a construction or goods and services company. In contrast, higher education is an asset for entering the professional services industry. Furthermore, earnings for business owners are positively correlated with having a bachelor’s degree for each of the three industries analyzed. This finding suggests that business owners with a bachelor’s or advanced degree are able to earn more in each industry.



CHAPTER 10: Anecdotal Analysis

I. Introduction

This chapter presents anecdotal testimony gathered through in-depth one-on-one interviews and public comments during the two business community meetings. The purpose of this examination is to determine whether METRO has committed acts that may have prevented Minority and Women-owned Business Enterprises' (M/WBE) access to METRO contract opportunities. The anecdotal testimony supplemented the statistical findings reported in *Chapter 7: Prime Contract Disparity Analysis* and *Chapter 8: Subcontract Disparity Analysis*.

The importance of anecdotal testimony in a disparity study was discussed in the landmark case, *City of Richmond v. J.A. Croson Co.*²⁸⁵ (*Croson*). The United States Supreme Court, in the 1989 *Croson* decision, considered whether or not anecdotal testimony could be used to justify remedial race-conscious remedies. The Court opined 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.”²⁸⁶

Anecdotal testimony of individual discriminatory acts, when paired with statistical data, the court found can document the routine practices affecting M/WBEs' access to contracting opportunities. Statistical data therefore quantifies the results of discriminatory practices, while anecdotal testimony provides the human context to understand the numbers. Anecdotal testimony collected from business owners for this Study provides information on the types of barriers that are perceived to exist within the market area and affect the development and sustainability of M/WBEs.

A. Anecdotal Evidence of Discrimination - Active and Passive Participation

Croson authorizes anecdotal inquiries along two lines. The first line of inquiry investigates active government discrimination as reflected in the government's award of prime contracts or its procurement policies and practices. Passive discrimination is the second line of inquiry. It is the actions of the private sector and the government's passive support of exclusionary practices that occur in the market area in which its funds are infused. Passive discrimination occurs when the government awards contracts to companies that discriminate against M/WBEs.²⁸⁷

The Court cautioned that anecdotal evidence of discrimination is entitled to less evidentiary weight than statistical findings because the personal evidence concerns more private or passive than active or government-sponsored activities. Relative weight was also assigned to the personal accounts. Personal accounts of discrimination that reflect isolated incidents were assigned less weight than

²⁸⁵ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 509 (1989).

²⁸⁶ *Id.*

²⁸⁷ *Croson*, 488 U.S. at 491-93, 509.



anecdotal evidence of a municipality's institutional practices. Institutional practices were considered to have a different and relatively greater impact on market conditions than other practices.²⁸⁸ Despite the differences in the perceived impacts of the different types of personal accounts the Court found 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.²⁸⁹

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.”²⁹⁰ Anecdotal evidence, the Court found, has value because it can paint a portrait of the practices and procedures that generally govern the award of public contracts in the relevant market area. These narratives, according to *Croson*, can identify specific generic practices that government can implement, improve, or eliminate to increase contracting opportunities for businesses owned by all citizens. In this Study, the utility of the anecdotal evidence collected is considered within the parameters of the law.

B. Anecdotal Methodology

The methods used to elicit anecdotal information consisted of public comments solicited during the business community meetings and one-on-one interviews conducted subsequent to the meetings. All the business owners interviewed were domiciled in Harris County, the market area. The determination of the market area is described in *Chapter 5: Market Area Analysis*.

1. Business Community Meetings

Phase one of the anecdotal process was the collection of public comments during the business community meetings held on April 4, 2020 via Zoom at 10:00 am and 3:00 pm, respectively. The meetings served as a platform to announce the study, inform the business community about the study's legal framework, methodology, and timeline. The business owners were provided an opportunity to speak with METRO representatives regarding contracting opportunities and they also were invited to sign-up for an anecdotal interview.

The outreach effort to promote the business community meetings targeted firms in the construction, professional services, and goods and services industries. The meeting was recorded and transcribed. Relevant testimony from the meeting has been incorporated in this chapter.



²⁸⁸ *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.”

²⁸⁹ *Croson*, 488 U.S. at 509.

²⁹⁰ *Id.*

2. One on One Interviews

One-on-one interviews were also used to collect anecdotal information. An extensive effort was undertaken to identify business owners willing to provide anecdotal accounts. Lists of the utilized businesses, certification directories and the attendee list from the business community meetings were used to identify interviewees.

Businesses that expressed interest in being interviewed were screened. The screener identified basic demographic data and specific information to determine the relevant experiences of the business owner. The screener also captured information regarding the interviewee's experience with public contracting and determined the person's willingness to recount their experiences to a trained interviewer. Structured anecdotal questions were used to solicit information in one-on-one interviews with the business owners that agreed to an interview.

II. Anecdotal Findings

The anecdotes describe general market conditions and experiences of the interviewees doing business, or attempting to do business, with METRO. The anecdotal accounts culled from the one-on-one interviews are described below.

A. Racial Barriers and Sexism

M/WBEs believe that racial barriers and sexism have affected their business development. Perceptions of these experiences are presented below.

A female owner of a professional services firm believes minorities and women face challenges in the market area that are unique to M/WBEs:

...the number one [challenge] is the expectation or assumption of our capacity and capabilities. [It is] based on a preconceived notion that small businesses, especially minority or female-run businesses, are not run in an organized manner, do not have the infrastructure, or may not have the most qualified at the helm.

A female owner of a professional services firm reported that her race and gender had a negative influence on her business relationships with METRO managers:

I definitely think it is negative. When you go to meetings for different upcoming projects, a community meeting, or even a pre-bid meeting, when you look around the room, or ask questions, the ones that do not look like me, they know them on first name basis. When they raise their hand it is 'John, Jim, how can I help you? What is your question? Yes. You can do that.' And it is apparent, you are looking around the room like who's John? How does John know



everybody? But it is very few females, very few African American females. When you add the number of females in the room, it is going to be fewer African Americans females in the room.

A female owner of a construction firm believes there is sexism in government contracting:

I am going to address government entities. First a lot of the entities that practice bad behavior tend to be operating under “man” power. So, opportunities for a small woman owned business are either mollified or non-existent because that is not who they do business with based on their culture, and whatever practices are ingrained in certain agencies and the private sector. So, I believe that there is some unfairness. It has opened up a little bit. I do not feel as ostracized, but there is always the, haggling when it comes to pricing. Can you do it for less? And you know, historically men do not do that, they just say, this is the price, that is my price. And that is it. So, my experience has been different. I would like to say that it is getting better.

B. Difficulty Breaking into the Contractor Community

Many interviewee accounts described difficulty breaking into METRO’s contracting networks because of preferred contractors. Informal networks advantage friends, colleagues, and associates in the award of prime contracts and subcontracts. The business relationships built within contracting networks can operate as a barrier to M/WBE’s participation on METRO’s contracts. A male minority owner of a goods and services firm believe that some specifications are beneficial for majority-owned companies:

It seems that a lot of the specifications are written specifically for majority companies. For instance, when I was seeking work from METRO a request for quotes for maintenance of the phone system had a stipulation that if you were not a distributor for the equipment that they specified, you could not bid on it. We could not be called a distributor because the manufacturer had a limit on the number distributors that they would have in a certain geographical footprint. And of course, none of those companies were companies that looked like me although I was certified on the equipment and had of years in the industry.



A minority male owner of an architecture and engineering firm described the difficulty his small firm encountered attempting to contract with METRO:

We ask ourselves, ‘Can we feasibly do this project within the proposed time frame given? Since we also have other projects and proposal. Small companies

are trying to stay in business, so they are doing work for other companies. They are working for entities other than METRO. And so, they have to take the time to say, okay, we will bid this METRO project. We would really like to work on this project. Larger companies have resources that make it easier to respond to bids than smaller businesses. We have to figure out if we even have a shot, or if it is worth pursuing.

This same business owner further believes METRO's selection process disadvantages small professional services firms:

In the selection process, we are constantly going up against giant companies that have done a project similar to the one that is being proposed. And because we are a small business, we cannot compete. This may be the first project of its type in the area. And because we are a small business that do not have the opportunity or the manpower to go out and do similar work. That does create a challenge in the selection process and there is a level of favoritism.

This minority male owner of a construction company described the difficulty his firm has experienced attempting to break into the contracting network in the market area:

Since we do not have an open relationship with them already, I do not see them as being open at all. There are two prime contractors that spring to mind right now that are working on METRO projects that will not answer a phone call from me. But a couple of those prime contractors are working on a few METRO projects right now. The one I did speak to said they decided to go in another direction.

C. Good Old Boy Network

This female owner of a professional services firm reported that she is not part of the contracting network:

During meetings when a hand is raised, they know your name. And when some people ask questions regarding the RFQ, they are familiar with the presenter. It is apparent that they have provided the service and they have a relationship. They are very familiar with METRO and METRO is very familiar with them.



A minority male owner of an architecture and engineering firm says the buddy system is at play which disadvantages new and small businesses:

Some people have decades-old relationships. So, when I go to meetings, I see certain people shake hands and be all friendly. But when I try to join in, I get a different vibe. And so, the buddy system seems to play a role with some of these larger entities versus smaller ones. If you have a smaller business, you are perceived as coming in a little wet behind the ears. He does not really know everyone, but you have Bob who goes to lunch or golf or whatever to create a bond. Whereby they say, 'Oh, well, let me give my friend a little bit of work.

A female owner of a construction company believes the same firms win most of the work:

We are on the outside looking in. Maybe they have established relationships. The impact is we do not have any METRO work. If we are SBE-certified, we should get some consideration. They should promote us to the prime contract level.

A male owner of an architecture and engineering firm also discussed favoritism:

There are some firms out there that definitely deserve to get selected again and again because of how they deliver their services and the quality of their work. No question about it, but there's others that fall into the category of favoritism. If we were to be candid and brutally honest and lay their product side by side and evaluate with measurable metrics, such as, cost, and quality there would not be much difference.

A minority male owner of a professional services firm believes prime contractors are reluctant to work with subcontractors that they have not previously used:

Primes are not set up to police subs. And I am using the word 'police' loosely. Once a sub has performed work for a prime and they are able to bill a prime, the prime can include them on their subcontracting plans and get the work inspected and signed off. That prime is probably going to be very reluctant... to let go of that particular sub. And so, for another sub who may be of similar background, price, experience, and expertise, that prime will be reluctant to take the new guy and give him an opportunity when you have got a guy who is already proven his performance. So yeah, do they play favorites? No doubt about it.



A female owner of a professional services firm explained why she believes certain prime contractors prefer to use the same contractors:

Yes, I believe the primes show favoritism to certain subcontractors. And I believe that happens because prime contractors are potentially afraid to risk bringing new companies that may not be able to deliver. So, they just focus on companies they know. They rather stay with them instead of giving the opportunity to another sub.

D. Prime Contractors Avoiding SBE Program Requirements

The interviewees described their experiences with certain prime contractors that used tactics to circumvent SBE Program requirements.

A minority male owner of a construction company reported that his subcontract was cancelled without warning:

Well, the problem that we face is I was stopped twice on a project belonging to METRO. It did not end well. It was not because we did something wrong. There are no consequences when prime contractors get rid of subcontractors with flimsy excuses. When they do not need you, they just get rid of you. There should be some kind of price to pay for something like that. They should not be able to get away with it. And METRO has no way of dealing with those prime contractors. That has made it possible for most prime contractors working with small businesses to do whatever they want. This almost shut down my company.

A female owner of an architecture and engineering firm described a situation where her subcontract was not honored by the prime contractor:

Our portion of the work was 2%, and they did not ask us to do anything. When METRO sets the goal, the prime give subcontractors pieces of work. On paper, our portion was 2%. If you are really truly interested in helping SBE businesses, they need to give them a chance to be primes.



A minority male owner of a goods and services company shared examples where his subcontract was reduced by prime contractors that did not comply with the goals:

The METRO board selected seven different prime consulting firms for [project name withheld], and we were subconsultant to three of the seven. Each of the subconsultant contracts were about [subcontract amount withheld]. One prime used us, the other two did not. We did not get any work from the other two. We were hoping that the SBE program would help. Unfortunately, we did not get any help.

A minority male owner of an architecture and engineering firm also reported that METRO prime contractors subcontracted with him and did not provide any work:

It happened several times to us where we were selected but did not get work. The prime told METRO that we did not do that type of work, which was not true, but that is the game they play. Prime contractors decide whether you get to work or not; METRO does not really do anything unless somebody complains. And if somebody complains, then they will go and say, let us see what we can do. Even though we were on certain teams, sometimes we did not get any work. On one contract we were supposed to get 35%. I got 2%.

A minority owner of a construction company believes that it is difficult for small contractors to grow in the current climate:

We cannot grow because we get leftovers. It is not that METRO isn't trying. METRO is trying. But the tactics of the big companies is overwhelming METRO.

A minority male owner of a goods and services company described how some prime contractors claim that they cannot find qualified subcontractors to fulfill SBE goals:

A lot of times they will say, 'I can't find one.' I cannot find someone that fits the bill. Or I can't find anybody who qualifies.'



A minority male owner of a construction company reported that some prime contractors skirt the rules to get around the SBE Program rules:

The SBE Program is valued, but it has not helped us. In the sense that primes are getting away with getting rid of small contractors. They really do not want

to work with small contractors. For instance, the METRO rail work is a lot of money and contracts. But the prime contractors that normally work on the rail, have made it impossible for a small business to participate. And now METRO has waived the small business participation for rail work. METRO thinks there are no small businesses that are capable of doing rail work, and that is not true. A few small businesses are capable of doing the work, but they cannot because of the size of the job. They do not have the bonding capacity to bid some of these jobs. So, there is not a lot of participation because the big companies that are doing the rail work have convinced METRO that the opportunities for small businesses are not there.

E. Public Agency Failure to Monitor Program Requirements

A minority male owner of a professional services firm believe METRO could do more to enforce the SBE goal requirements:

If the prime commits to give certain percentages to small businesses, then METRO needs to be like TXDOT. TXDOT has a criterion where all HUB zone and DBEs get their fair share. Otherwise, TXDOT will ask the prime why the sub did not get their work. So, METRO needs to have that kind of enforcement. This will help a small business significantly. Because some primes meet the 35% goal with certain subcontractors on the team but do not shared the work with other subs on the team. That is exactly what happened with us.

A female owner of a professional services firm believes more monitoring is needed to confirm SBE participation on their contracts:

They may have minority participation, that is great, but the same businesses are being granted the work. They need to realize that the same company is getting the work over and over.

A minority male owner of an architecture and engineering firm believes METRO does not always enforce the goals:

I guess it is not a straightforward yes or no answer. The SBE program does provide the opportunity because METRO tends to have a higher participation than the other entities. So, in that way, there are more opportunities. But also, on the other hand, METRO does not really do anything about enforcement other than saying, ' Oh, we'll do something'. But if somebody does not meet the goal, they do not do anything about it.



F. Difficulty Navigating the Bid Process

Several business owners described barriers they encountered trying to get information on METRO's bid information, understanding the RFPs, or gathering information for bids.

A female owner of a professional services firm expressed some concern regarding METRO's dissemination of contract opportunities:

In terms of their transmittal of contract opportunities for training and development, I have not seen a formal RFP.

A female owner of a professional services firm described METRO's contract notification system as complex and not user friendly:

Oh gosh, I still do not know how to use the system. METRO has a complex system now that they changed it about five years ago where you register and download RFPs and check who is awarded. It is cumbersome. I never do it anymore. Every time I try to get in their system, I have to start over or call the help desk. I do not know who created it ...but it is not user friendly. I do not receive anything that notifies me of any RFPs or RFQs in the queue.

This male owner of an architecture and engineering firm reported that he has difficulty getting contracting notifications in a timely manner:

When it comes to METRO's solicitations, we have to constantly check their website. I constantly monitor their website because a solicitation can be out for a day or two sometimes before I can catch it. And with certain solicitations if you do not catch it right when it drops, people miss out. So, if it drops and I am not there the day it drops, chances are I will miss my chance because someone else has seen it.

G. Barriers to Financing and Bonding

Several business owners reported on the obstacles they encountered trying to secure financing or bonding for their small businesses.



A female owner of a professional services firm shared her experience getting financing for her business:

There is still the disparity for minority and women-owned businesses in the finance and capital space. I have acquired some lines of credit, but it has been very sporadic. It has not been consistent.

A female owner of a professional services company described her difficulties in obtaining financing for her small business:

The banking industry is not very kind to a women-owned company that provides professional services.

A minority male owner of a construction company discussed how the lack of financing affects minority contractors:

I have had many conversations with prime contractors and majority-owned contractors, and I have literally poised this very question to them: You've got two minority contractors, both similar in background, they both submit pricing to you, they both are within cents of each other pricewise. What makes you choose one over the other? And across the board it has been amazing to me that majority prime contractors will always say, 'Well, it's the contractor that's not going to be ringing my phone for a check tomorrow.' And I have heard those words over and over again. I have even heard one particular prime contractor say, 'Well, I always award the funds to who can extend me the most credit.' And that is a direct quote. I think a lot of minority contractors do not realize and especially METRO contractors oftentimes do not realize that because the construction industry is a capital-intensive industry, your financial capability, no matter your skill level, ultimately it gets down to whether or not you are savvy, educated, trained, and you can execute demonstrate your financial capability.

A minority male contractor believes that it is difficult for M/WBEs to gain access to financial resources:

M/WBEs are challenged in the sense that funds are not available to them. If you are looking to fund a project, when you go to the bank, those funds are not easily available to a minority company. Even the stimulus package that was



passed recently because of COVID-19, most minority companies did not get any money. My company did not get any.

A minority male owner of a construction company reported that METRO's bonding requirements can be a deterrent for SBEs:

Another problem related to bonding and insurance is some small businesses are not able to buy the type of insurance required to bid METRO projects. And therefore, are discouraged from bidding on the project, even though they have the capability.

A female owner of a professional service firm commented on how bonding requirements exclude her firm from submitting bids:

When it comes to financing big contracts such as METRO Next, which requires modification of routes and beautification of certain areas so that the METRO system can run in certain areas of town. My small company could not possibly submit a bid based on the anticipated bond requirements.

H. Size and Capacity Issues

Several business owners reported that their business size or capacity precludes their business from being competitive against larger businesses.

A minority male owner of a goods and services company believes the specifications included on METRO's bids makes it hard for small businesses to compete:

All of the copiers, printers, and print shop bids specifications are not generic. They are specifications written based on the equipment they already had and the vendors they already utilized. So, in terms of coming in and actually having a real opportunity to compete, I do not feel is realistic.

A female owner of an architecture and engineering firm expressed concern after her local firm was passed over for an international company:

We did not get the job. It was given to an international firm. We are a local women-owned business that provide quality of service. It is Texas money. Why do you always reach for this international company? If you are committed to



the local people, spend the money locally here. We pay the local tax. They should be more sensitive to supporting local businesses.

A minority owner of an architecture and engineering firm described how the scope of work for some METRO projects shuts out small firms:

A small business like a painter has a much better chance of receiving a full award than a small engineering firm simply because of the scope of the projects. In engineering, it is nearly impossible for a small business to compete on the level of which they are asking. A business that is 10 people strong cannot feasibly compete with a business that is a hundred people strong. This creates unfair competition between a large and small business.

I. SBE Program Comments

A female owner of a professional service firm believes METRO's SBE Program is one of the best in the country:

I know that METRO's SBE Program is one of the top programs in the country, one of the most effective in the Houston area, and considered to be well-respected in the in the state. They have a very focused staff, one that listens, is creative in their approach to outreach. When we were doing the physical, face-to-face outreach, they were very positive and created job opportunities.

A minority male owner of a professional services firm explained why he believes the SBE Program is needed for small businesses in Harris County:

The SBE Program at METRO really connects contractors with small businesses who want to do business with METRO through their small business university trainings and more importantly, the introductions that the Office of Small Businesses offers. The Office of Small Business team has a process where they make introductions to the procurement professionals that operate within METRO and they provide access to the end users who are making the request for a particular goods or services. And that is where I see the real value of the SBE Program. And having participated in the different programs and met so many of the contractors who are SBE certified, I can tell you that for most, I have heard very positive feedback as far as the value and the effort that is put forth by the folks at METRO for the SBEs to actually get business.



A minority male owner of a professional services firm is hopeful that the disparity study will help METRO improve its contracting practices for minority and women-owned businesses:

I think it is great METRO is doing a disparity study to actually dig into some of the tough issues that are keeping a lot of our minority and women-owned businesses from growing. I think it will help METRO better position the agency to improve. They are doing, I think, the best job that they know how to do. And these kinds of studies really do help, I think they call attention to some of the real problems that exist. Now, whether METRO actually takes action to address them or not, that is something different, but it will not be because they were unaware of the problem.

A female owner of a professional services firm is hopeful that the disparity study will assist METRO address the issues faced by small businesses:

Well, the greatest solution is the disparity study. It seems METRO is now aware of how they award contacts to businesses. It used to be that contracts were awarded to the lowest bidder. That has gone out the door. Now it is a matter of performance, relationships, and history. But if you are a small business that may have under 10 employees and are competing against a firm with 50 employees for the same work, you do not have the same staffing as the larger company to be competitive.

A minority male owner of an architecture and engineering firm voiced his concerns about the SBE Program:

The SBE Program is a bit broken. It favors small businesses within certain areas. A small business such as ours does not get opportunities that other types of small businesses may get. We are an engineering company, and we are constantly at the mercy of prime consultants. We have to beg them to use us. So, when it comes to working with METRO, we are at the mercy of a prime consultant.

A female owner of a professional services firm believes METRO's SBE Program outreach activities are comprehensive:

I know they have a comprehensive engagement programs for small businesses. They offer a plethora of training and development in order to get businesses in position to work with them. I do know that the different supplier diversity



and/or MBE representatives but the team members are committed to engaging us. They are active in our community.

A minority male owner of a goods and services company questioned whether METRO's commitment to small businesses is inclusive of minority-owned businesses:

I do not feel like there is a clear commitment to new businesses or minority businesses. You can drop all small businesses into one bucket, but if you look at minority businesses, there are all different types of ethnicities in that minority bucket. Although there are African American, Hispanic American, and Asian American, typically, white women get the contract. They get more contracts than all of the minorities. They may be the wife or daughter of the 'owner.' Are they really trying to spread the wealth into other communities?

A female owner of an architecture and engineering firm voiced concern about the selection process and was disappointed with the debriefing process:

I requested a debriefing, and we did it over Zoom. They did not have the answers to our questions. I did not learn why they selected the other consultant.

A minority male owner of a professional services firm believes METRO's selection process could be more transparent:

I do not know if they have certain a team that evaluates the proposals. I am still struggling to know how they evaluate proposals and make selections. It is just not clear to me. There seems to be a lot of politics involved, which is really hard on small firms when politics come into the selection process.

A minority female owner of a professional services firm believes METRO's Small Business Program is needed to facilitate the participation of small businesses:

I would say they have done a pretty good job in terms of inclusion.



A minority male owner of a construction company believes the SBE Program is helpful for small businesses but recommends METRO do more to unbundle large contracts:

METRO's Small Business Program has been very helpful in developing small businesses, but there is still a lot of work to be done when it comes to subcontracting. The contracts that METRO awards are kind of large and include an abundance of requirements that small businesses are not capable of providing.

A minority male owner of a goods and services firm credits the SBE program for the work he has received from METRO:

A contractor told me that the only reason I was on the team is because they had to have me there to meet the goal.

A female owner of a construction company believes the SBE Program is effective in maximizing the participation of SBEs on METRO's contracts:

Well, the SBE Program is a tool. METRO gets a lot of brownie points for utilizing us. So, it is a win-win because we worked a long time to establish the relationship we have with METRO. It is a win-win for both sides.

A minority male owner of an architecture and engineering firm believes the SBE Program has value and has helped his firm:

The SBE Program did help our company for sure. We always believe in getting the work based on our qualifications. So, that is the way we operate as a prime contractor. I commend the major projects that METRO awards. But they hire the biggest national-level companies for their multi-billion-dollar projects. So, it is really hard to team with them with based on the RFQ conditions, but METRO has a small business requirement. Also, METRO makes sure that small businesses are not unduly burdened with extensive contract requirements. And that helped us greatly because we were able to compete, and we were able to get work a big project.



A female owner of a construction company believes the SBE Program facilitates opportunities for small businesses:

It provides SBE subcontracting opportunities with large firms that might not initially look at us. And if we are good and that is a big if, because I know a lot of certified companies that are not good, but the ones that are good then, it gives us an opportunity to work and prove ourselves. And we continue to get work in the future. It is a win-win because the general contractors get the small business credits, and we get the work.

This minority male owner of a professional services company believes that barriers to contracting opportunities for small businesses originate at the procurement level not the SBE Program Office:

When contractors describe the trouble, they encounter seeking work from METRO, it does not happen with the Office of Small Business. It usually happens at the procurement level. But if an issue comes up during the procurement process, oftentimes the Office of Small Business really does not have the leverage it needs to intervene and investigate the allegation.

A female owner of a professional services firm described the SBE Program as helpful for her small business:

I believe the program has helped me get access to contracts. Whether it was through training or their outreach activities.

J. Exemplary Practices/Positive Experiences

The following business owners reported exemplary practices and positive experiences they have had with METRO.

A female owner of a goods and services company commends the educational opportunities offered through the SBE Program:

The Office of Small Business offers a lot of education and training for small businesses. They even tell you about OSHA for free. And they follow up to make sure you are on the right track. These classes are free and outstanding. And, if you need anything, they will help you with what you need.



A female owner of a professional services firm gave METRO's SBE Program kudos for helping her business:

In terms of networking and introductions, the program has been beneficial. My SBE certification has been beneficial because it just further confirms our credibility as a provider.

A female owner of a professional services firm described METRO's staff as supportive:

They are very supportive and accessible. It has been a great experience. I enjoyed the trainings and the support from the staff.

A male owner of an architecture and engineering firm reported METRO's SBE Program has helped his business compete:

The SBE Program is intended to help small companies like my mine, starting out, to hopefully participate in the work that is distributed through our community. Especially, since we are the guys who pay local taxes. I think it helps us compete with some of the bigger, more established firms who obviously could get a \$10, \$5, or \$2 million contract.

A minority male owner of a professional service firm believes METRO is committed to supporting small businesses:

It is obvious that METRO based on their practice and policy, want to do business with SBEs. They have made that very clear through their commitment over the years to do business with SBEs. But from a competitive standpoint, it is really up to the SBE to make sure that they are efficient at bringing value to the agency, which makes them, of course, more competitive.

A female owner of a professional services firm described several examples of when METRO staff has been helpful to her company:

Since I have been with METRO, even in the capacity of a subcontractor, they were always professional. The individual that hired my prime contractor provided training and always gave us feedback. Other individuals in the SBE Program would always ask if they could help. I contacted the SBE program with a question and the person called me 24 hours later. They guided me



through the process and answered all of my questions in order for me to get certified.

A female owner of a professional services firm shared a positive experience she had working with METRO managers:

We have super relationships with some of the managers. We had a meeting scheduled with [staff name withheld] who was very helpful. Because of traffic, I ended up being about 10 minutes late to the meeting. I did not have any projects with METRO at that time. And he told me that he had a busy schedule that day and he still met with me.

A female owner of a professional services firm described the SBE Program's training workshops as helpful to her business:

Years ago, when we started, METRO provided workshops. We attended the METRO University. We went to workshops about how to do business with METRO, which went into detail about reviewing a procurement. And they facilitated introductions to procurement officers to learn about upcoming procurements.

A female owner of a professional services firm reported that METRO's networking events were beneficial for her business:

Those introductions were helpful. Their networking events has been extremely helpful. We are given an opportunity to meet project managers, or procurement officers. So, we were one of those companies that took advantage of those types of resources.

K. Recommendations

Recommendations were offered by interviewees to increase the participation of minority, women, and other small-owned businesses on METRO projects.

A male owner of a professional services firm recommends METRO advertise smaller contracts and enforce SBE goals for subcontractors:

I hope they can design some smaller contracts for a firm like ours. I strongly believe that METRO should go in that direction. Sometimes it is hard to design



a smaller contract because you have to piecemeal large projects. However, METRO must continue to enforce the contract percentages. There should not be any provisions in the contract where they can waive or not meet the subconsultant goals.

A male owner of a professional services firm recommends debriefing for unsuccessful bidders:

The selection process is a point system. There should be an automatic process for debriefing. They need to explain why a firm was not selected. It would help firms better prepare for next time.

A male owner of an architecture and engineering firm recommends METRO continue their outreach efforts:

To advance the level for the small businesses, outreach must continue. They need to keep doing it. I think I am stealing this from the director of public works, but before the pandemic, we had a chance to have a coffee with her once a year. It was a small group of folks, and you could not bring anybody else. But more of this would help level the playing field. I give her an A plus for coming up with that concept. It is another way for METRO to reach out to the community. METRO does a fairly good job of trying to be very inclusive.

A female owner of a construction company suggest more transparency on METRO's selection process:

METRO should make the selection process clearer. We were part of several teams as a subconsultant, but we never won anything. It would help to know how decisions are made. I would like to see outreach that includes upcoming projects.

A female owner of a goods and services firm recommends more informed debriefing sessions:

I think it would be good if they let you know if somebody got the bid and if you were close. Were we too low, too high?

A minority male owner of a professional services business recommends that the Office of Small Business be given more power to be stronger advocates for SBEs:



I think it would require a board action and a policy change to give the Office of Small Business the latitude to intervene. When there are problems that come up where perhaps the specification or pricing is unclear. It is hard for a small business to actually compete, but they need advocates that can make introductions to procurement and end users and get answers to question during the solicitation process. When the procurement comes out, sometimes it is unclear, or it is not written correctly. That is where I believe board action is needed to amend policy to give the Office of Small Business more latitude to a take action.

A male owner of an architecture and engineering firm suggests that contract opportunities be posted with more advance notice:

We do not have a depth of resources including full-time marketing or business development staff. We cannot afford it. If potential opportunities were posted sooner than just a week or two would be helpful. That is one a way of leveling the playing field because the bigger companies have full-time marketing.

A female owner of a professional services firm recommends METRO break larger contracts into smaller ones, when feasible, to give SBEs more opportunities:

My recommendation is for METRO to review bids before they are released to determine if any potential opportunities being advertised could be scaled down so that small companies, like mine can compete. Instead of having to wait for a big company to get awarded, and then determine if they will use our services.

A minority male owner of a goods and services company recommends that METRO unbundle contracts:

So, when you talk about small companies, METRO has an SBE Program, but in terms of their contracts, more need to be segmented. They should break down larger contracts that could be handled by smaller entities. Or they will continue to just do business with the same big boys.



A minority male owner of an architecture and engineering firm suggests METRO consider preferences for locally owned businesses:

I do not know if this would pass legal mustard regarding federal money. I am not an attorney, but they should also have a preference for local businesses. I

know one firm, whose name I will not mention, but they shipped the work off to India.

The female owner of a professional services firm suggests METRO employ certification reciprocity and improve communication with local businesses regarding upcoming contracts:

I think that there should be certification reciprocity. So, if you gain the city's certification, you get reciprocity across all other major cities, and city-affiliates. The fact that we have to do multiple certifications, needs to be addressed. METRO should also make sure we have foreknowledge of upcoming contract opportunities. If they know your NAICS or NIGP codes, make sure that we have foreknowledge of major events that are going to happen or major bid opportunities so that we can prepare. Just a heads up to everyone regarding certain codes. These types of things help us plan and scale our business effectively. It gives us time to research so we can respond efficiently to an RFP.

A female owner of a construction company recommends revamping bid packages to make them easier to understand:

Possibly making the paperwork or bid packages a little easier to understand. I have responded to bids for many years and I still find it very stressful. Sometimes it is not exactly clear what needs to be turned in with the bid. And that can be very stressful. Plus, it is very time consuming because you have to fill out the same paperwork for every single bid even if you just did one the week before. For this reason, I do not respond to a lot of them. So, making the paperwork a little more user-friendly would be great.

A minority male owner of professional services firm recommends including SBE goals on more contracting opportunities:

There are some procurements that come out that do not have SBE goals on them. I would like to see more procurements with goals on them. I would like to see METRO's Office of Small Business be more vigilant about working with procurement to police that a bit better and say, 'Wait a minute, why isn't there goals on this?'



This same business owner further recommends that METRO unbundle contracts:

I think unbundling is necessary, not just with METRO, but any agency who is looking to interact with small and minority-owned businesses. I personally feel very strongly about that particular subject because over I have noticed that items of work are added to make the contract bigger so that only larger contractors can meet the financial capability requirements.

A minority male owner of a construction company also recommends more projects include SBE requirements:

If you really want to see small businesses flourish in Houston with METRO, they must downsize some of the projects and make sure that the big ones have some SBE percentages in it.

A minority male owner of a construction company contractor recommends METRO reduce the size and timeline of certain projects so that more small businesses could participate:

My major recommendation is to increase small business participation by reducing the size of the projects, especially construction projects that involve rail and facilities. Reducing the size of the projects will allow businesses that are small in capital and size can participate for those projects. And these big projects run for five years. Five years is a long time for small businesses not to benefit on those procurements. That is a long time to wait around, to be a part of those projects.

A minority male owner of an architecture and engineering firm suggests METRO sponsor more industry-focused network meetings:

Every quarter they should sponsor industry meetings. And subconsultant opportunities should be discussed. Potential prime consultants can check out the subconsultants before teams are formed.



III. Summary

This chapter presented a qualitative analysis of the barriers and exemplary practices business owners experienced while working on or seeking work from METRO. The interviewees referenced barriers to accessing contracts based on conditions such as METRO's use of preferred contractors and barriers based on the size of businesses. Kudos were given to METRO staff and the SBE Program.

Recommendations were offered to improve the Program's effectiveness in fulfilling its mission. This anecdotal information, together with the statistical findings have informed the remedies presented in *Chapter 11: Recommendations*.



CHAPTER 11: Recommendations

I. Introduction

The Disparity Study (Study) documented a statistical disparity in the award of both the prime contracts and subcontracts METRO awarded during the study period. Race and gender-specific and race and gender-neutral recommendations are offered to remedy the documented statistically significant disparity in the utilization of the available Minority and Women Business Enterprises (M/WBEs). Recommendations are also offered to maximize the participation of veteran and disabled person-owned business enterprises on METRO's construction, professional services (which included architecture and engineering), and goods and services contracts.

II. Summary of Disparity Findings

A. Prime Contract Disparity Findings

1. Construction Prime Contracts

Table 11.1 presents the disparity findings for construction prime contracts awarded during the October 1, 2013 to September 30, 2018 study period. Disparity was found for African Americans, Subcontinent Asian Americans, and Hispanic Americans on informal contracts under \$10,000. Disparity was also found for African Americans on informal prime contracts valued from \$15,001 to \$50,000. Caucasian Females were underutilized on construction prime contracts valued between \$50,000 and \$3,530,000 and informal prime contracts valued from \$10,001 to \$15,000 and \$10,000 and under.



**Table 11.1: Disparity Summary: Construction Prime Contracts,
October 1, 2013 to September 30, 2018**

Ethnicity/Gender	Construction			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts between \$50,000 and \$1,560,000
African Americans	<i>Disparity</i>	<i>Underutilized</i>	<i>Disparity</i>	No Disparity
Asian-Pacific Americans	----	----	----	----
Subcontinent Asian Americans	<i>Disparity</i>	----	No Disparity	No Disparity
Hispanic Americans	<i>Disparity</i>	<i>Underutilized</i>	No Disparity	No Disparity
Native Americans	----	----	----	----
Caucasian Females	<i>Underutilized</i>	<i>Underutilized</i>	No Disparity	<i>Underutilized</i>

(----) denotes an underutilized group with too few available firms to test statistical significance.

2. Professional Services Prime Contracts

Table 11.2 presents a summary of the disparity findings for professional services prime contracts awarded during the October 1, 2013 to September 30, 2018 study period. Disparity was found for African Americans, Subcontinent Asian Americans, Hispanic Americans, and Caucasian Females on professional services informal prime contracts valued at \$10,000 and under. Disparity was found for African Americans, Subcontinent Asian Americans, and Caucasian Females on informal professional services prime contracts valued from \$10,001 to \$15,000 and for African Americans, Subcontinent Asian Americans, Hispanic Americans, and Caucasian Females on informal prime contracts valued from \$15,001 to \$50,000. Disparity was also found for African Americans and Caucasian Females on professional services formal prime contracts valued between \$50,000 and \$1,560,000.



**Table 11.2: Disparity Summary: Professional Services Prime Contracts,
October 1, 2013 to September 30, 2018**

Ethnicity/Gender	Professional Services			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts between \$50,000 and \$1,560,000
African Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	<i>Underutilized</i>	----	No Disparity	<i>Underutilized</i>
Subcontinent Asian Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Underutilized</i>
Hispanic Americans	<i>Disparity</i>	<i>Underutilized</i>	<i>Disparity</i>	No Disparity
Native Americans	<i>Underutilized</i>	----	----	----
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>

(----) denotes an underutilized group with too few available firms to test statistical significance.

3. Goods and Services Prime Contracts

Table 11.3 presents a summary of the disparity findings for goods and services prime contracts awarded during the October 1, 2013 to September 30, 2018 study period. Disparity was found for African Americans, Asian-Pacific Americans, Subcontinent Asian Americans, Hispanic Americans, and Caucasian Females on goods and services informal prime contracts on the three informal levels: \$10,000 and under, \$10,001 to \$15,000, and \$15,001 to \$50,000. Disparity was also found for African Americans, Subcontinent Asian Americans, and Caucasian Females on prime contracts valued between \$50,000 and \$670,000.



**Table 11.3: Disparity Summary: Goods and Services Prime Contracts,
October 1, 2013 to September 30, 2018**

Ethnicity/Gender	Goods and Services			
	Contracts \$10,000 and Under	Contracts \$10,001 to \$15,000	Contracts \$15,001 to \$50,000	Contracts between \$50,000 and \$670,000
African Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Asian-Pacific Americans	<i>Disparity</i>	No Disparity	No Disparity	No Disparity
Subcontinent Asian Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>
Hispanic Americans	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	No Disparity
Native Americans	----	----	----	----
Caucasian Females	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>	<i>Disparity</i>

(----) denotes an underutilized group with too few available firms to test statistical significance.

B. Subcontract Disparity Findings

1. Construction and Professional Services Subcontracts

Table 11.4 presents a summary of the disparity findings for construction subcontracts and professional services subcontracts. Disparity was found for African Americans in both industries. Caucasian Females were underutilized in both industries.

**Table 11.4: Subcontractor Disparity Summary,
October 1, 2013 through September 30, 2018**

Ethnicity	Construction	Professional Services
African Americans	<i>Disparity</i>	<i>Disparity</i>
Caucasian Females	<i>Underutilized</i>	<i>Underutilized</i>



III. Assessment of Metro's Small Business Enterprise Program

Mason Tillman reviewed Small Business Programs across the country. The METRO Small Business Program is a model program, aggressive and innovative, which has made commendable progress in providing contracting opportunities to the small business community. The efficacy of METRO's Small Business Enterprise (SBE) Program was assessed and determined that during the study period the program achieved parity in the award of subcontracts to most available M/WBEs.

The program, promulgated in 2005 following the suspension of the Minority and Woman-owned Business Enterprise Program, was implemented to ensure equity in the award of contracts to small businesses owned by Caucasian females and minority groups in METRO's service area. The Office of Small Business managed the implementation and monitoring of the SBE Program.

Table 11.5 charts the formation of the Small Business Enterprise Program from the suspension of the M/WBE Program in 1990.

Table 11.5: METRO's Business Enterprise Programs Formation

Business Enterprise Program Timeline		
Business Enterprise Program	Dates	Goals
Minority and Woman-owned Business Enterprise Program	1979 - 1990	20% MBE
		5% Caucasian WBE
Disadvantaged Business Enterprise Program ²⁹¹	1990 - present	19% DBE ²⁹²
Business Development Program	1997 - 2005	35% SBE
Small Business Enterprise Program	2005 - present	35% SBE

A. SBE Program Achievements

METRO's SBE program has established a comprehensive set of race and gender-neutral measures. The program's achievements in awarding contracts to small, minority, and women-owned businesses has established METRO as a leader in the region. METRO is acclaimed as the first agency in the region to:

- set a 35% SBE contract goal
- require prime contractors to fulfil the SBE goal with certified businesses at bid opening
- implement multi-trades contracting
- offer monthly Small Business University (SBU) training
- provide one-on-one business assessments



²⁹¹ METRO's DBE Program was suspended in 1993 after a legal challenge.

²⁹² METRO's initial DBE goal was 21%.

1. Recognition and Awards

Highlighted below are organizations that have recognized METRO for its commitment and success increasing the participation of small, minority, and women-owned businesses on its contracts:

- Houston Minority Supplier Development Council
- Women's Business Enterprise Alliance
- Greater Houston Black Chamber
- National Association of Minority Contractors
- Tri-County Regional Black Chamber of Commerce
- S.C.O.R.E.
- Greater Houston Business Procurement Forum
- She Said. She Led. She Is.
- Women Contractors Association
- Government Procurement Connections
- Texas Women Empowerment Foundation
- Subcontractor U.S.A. Top 25 Prime Contractors
- Houston Minority Enterprise Development Week
- Houston Money Week
- Cooperative Association

2. Outreach/Business Development/Technical Assistance

The outreach, business development, and technical assistance provided by the SBE Program to the small business community are comprehensive. The program provides the following:

- Communicates current and upcoming solicitations to partner organizations and chambers of commerce through regular e-blasts.
- Hosts and participates in virtual outreach events to keep the small business community updated on key events and projects.
- Facilitates an interagency mentor-protégé program.
- Offers free Small Business University (SBU) classes designed to help firms understand how to do business with METRO including:
 - How to do business with METRO
 - Navigating METRO's RFP, RFQ and IFB solicitations
 - How to price your proposal
 - METRO online certification workshop
 - Accessing capital
 - Bonding and insurance workshop
- Provides small business and procurement help desk services.
- Maintains online business assessment tool and offers one-on-one sessions to help small businesses better understand their capacity to do business with METRO.



3. Certification Services

METRO offers vendors a streamlined SBE certification process at no cost and an expedited SBE certification for firms certified as DBEs. The SBE services include:

- Certification application processing time of 15 to 30 days.
- Certification valid for three years.
- Reciprocal certification with regional governments and associations:
 - Fort Bend Independent School District
 - Houston Community College
 - Houston First
 - Port Houston
 - Houston Minority Supplier Development Council

4. SBE Compliance Standards

The SBE Program compliance standards include:

Pre-Award

- SBE goals on projects with subcontracting opportunities.
- Prime contractors required to meet the SBE goal at bid opening.
- SBE requirements included in pre-bid, pre-proposal, and pre-submittal meeting agendas.

Post-Award

- Substitution or addition of subcontractor approval by the SBE Program Office.
- Substitution of certified firm must be replaced with certified firm.
- SBE utilization is monitored.
- Project management report describing SBE-related project status provided to departments.
- Subcontract agreements are reviewed to ensure existence of SBE-related, flow-down language.
- Online application tracks prime contractor and subcontractor payments.
- Formal process for prime contractor and SBE dispute resolution.

B. Small Business Enterprise Utilization Findings

The utilization of certified SBEs on METRO's prime contracts during the October 1, 2013 to September 30, 2018 study period was reviewed. The SBE utilization findings at the prime contract and subcontract levels are summarized in Table 11.6.



1. Certified SBE Prime Contractor Analysis

African Americans received 395, or 26.25% of the prime contracts awarded during the study period, representing \$16,333,313, or 25.53% of all prime contract dollars.

Asian-Pacific Americans received 40, or 2.66% of the prime contracts awarded during the study period, representing \$2,104,483, or 3.29% of all prime contract dollars.

Subcontinent Asian Americans received 38, or 2.52% of the prime contracts awarded during the study period, representing \$3,882,494, or 6.07% of all prime contract dollars.

Hispanic Americans received 223, or 14.82% of the prime contracts awarded during the study period, representing \$20,459,457, or 31.98% of all prime contract dollars.

Native Americans received 7, or 0.47% of the prime contracts awarded during the study period, representing \$7,674, or 0.01% of all prime contract dollars.

Caucasian Females received 441, or 29.30% of the prime contracts awarded during the study period, representing \$8,654,958 or 13.53% of all prime contract dollars.

Non-minority Males received 361, or 23.99% of the prime contracts awarded during the study period, representing \$12,524,101, or 19.58% of all prime contract dollars.



**Table 11.6: Certified SBE Prime Contractor Utilization, All Industries,
October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	395	26.25%	\$16,333,313	25.53%
Asian-Pacific Americans	40	2.66%	\$2,104,483	3.29%
Subcontinent Asian Americans	38	2.52%	\$3,882,494	6.07%
Hispanic Americans	223	14.82%	\$20,459,457	31.98%
Native Americans	7	0.47%	\$7,674	0.01%
Caucasian Females	441	29.30%	\$8,654,958	13.53%
Non-minority Males	361	23.99%	\$12,524,101	19.58%
TOTAL	1,505	100.00%	\$63,966,480	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	266	17.67%	\$1,442,237	2.25%
African American Males	129	8.57%	\$14,891,077	23.28%
Asian-Pacific American Females	2	0.13%	\$3,609	0.01%
Asian-Pacific American Males	38	2.52%	\$2,100,874	3.28%
Subcontinent Asian American Females	5	0.33%	\$549,642	0.86%
Subcontinent Asian American Males	33	2.19%	\$3,332,852	5.21%
Hispanic American Females	12	0.80%	\$387,995	0.61%
Hispanic American Males	211	14.02%	\$20,071,462	31.38%
Native American Females	1	0.07%	\$4,100	0.01%
Native American Males	6	0.40%	\$3,574	0.01%
Caucasian Females	441	29.30%	\$8,654,958	13.53%
Non-minority Males	361	23.99%	\$12,524,101	19.58%
TOTAL	1,505	100.00%	\$63,966,480	100.00%

The certified SBE prime contractor utilization analysis for all industries combined revealed that Hispanic Americans received most dollars. When the utilization of certified SBEs was compared to the percent of each ethnic group on METRO's list of certified SBEs, African Americans and Native Americans were underutilized at a statistically significant level. Table 11.7 depicts the disparity analysis of the SBE-certified contractors in all industries according to ethnicity and gender.



**Table 11.7: Utilization of Certified SBEs, All Industries,
Prime Contracts, October 1, 2013 to September 30, 2018**

Ethnicity	Actual Dollars	Utilization	Availability	Expected Dollars	Difference	Disp. Ratio	P-Value
African Americans	\$16,333,313	25.53%	32.73%	\$20,935,539	-\$4,602,225	0.78	< .05 *
Asian-Pacific Americans	\$2,104,483	3.29%	2.90%	\$1,855,782	\$248,701	1.13	**
Subcontinent Asian Americans	\$3,882,494	6.07%	5.80%	\$3,711,564	\$170,930	1.05	**
Hispanic Americans	\$20,459,457	31.98%	21.94%	\$14,034,350	\$6,425,107	1.46	**
Native Americans	\$7,674	0.01%	1.18%	\$753,911	-\$746,237	0.01	< .05 *
Caucasian Females	\$8,654,958	13.53%	12.42%	\$7,945,066	\$709,892	1.09	**
Non-minority Males	\$12,524,101	19.58%	23.03%	\$14,730,268	-\$2,206,168	0.85	**
TOTAL	\$63,966,480	100.00%	100.00%	\$63,966,480			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	\$1,442,237	2.25%	11.42%	\$7,307,141	-\$5,864,904	0.20	< .05 *
African American Males	\$14,891,077	23.28%	21.31%	\$13,628,398	\$1,262,679	1.09	**
Asian-Pacific American Females	\$3,609	0.01%	0.54%	\$347,959	-\$344,350	0.01	----
Asian-Pacific American Males	\$2,100,874	3.28%	2.36%	\$1,507,823	\$593,051	1.39	**
Subcontinent Asian American Females	\$549,642	0.86%	1.45%	\$927,891	-\$378,249	0.59	< .05 *
Subcontinent Asian American Males	\$3,332,852	5.21%	4.35%	\$2,783,673	\$549,180	1.20	**
Hispanic American Females	\$387,995	0.61%	4.99%	\$3,189,625	-\$2,801,630	0.12	< .05 *
Hispanic American Males	\$20,071,462	31.38%	16.95%	\$10,844,725	\$9,226,737	1.85	**
Native American Females	\$4,100	0.01%	0.27%	\$173,980	-\$169,879	0.02	----
Native American Males	\$3,574	0.01%	0.91%	\$579,932	-\$576,358	0.01	----
Caucasian Females	\$8,654,958	13.53%	12.42%	\$7,945,066	\$709,892	1.09	**
Non-minority Males	\$12,524,101	19.58%	23.03%	\$14,730,268	-\$2,206,168	0.85	**
TOTAL	\$63,966,480	100.00%	100.00%	\$63,966,480			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	\$42,787,422	66.89%	64.55%	\$41,291,146	\$1,496,276	1.04	**
Woman Business Enterprises	\$11,042,541	17.26%	31.10%	\$19,891,661	-\$8,849,120	0.56	< .05 *

(*) denotes a statistically significant underutilization.

(†) denotes a statistically significant overutilization.

(**) this analysis does not test statistically the overutilization of certified SBEs.

(----) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.



2. Subcontractor Utilization Analysis

The utilization analysis of certified SBEs on construction and professional service subcontracts during the October 1, 2013 to September 30, 2018 study period is depicted in Table 11.8.

African Americans received 54, or 19.71% of the subcontracts awarded during the study period, representing \$5,060,419, or 10.09% of the subcontract dollars.

Asian-Pacific Americans received 18, or 6.57% of the subcontracts awarded during the study period, representing \$1,558,995 or 3.11% of the subcontract dollars.

Subcontinent Asian Americans received 24, or 8.76% of the subcontracts awarded during the study period, representing \$6,862,553, or 13.68% of the subcontract dollars.

Hispanic Americans received 78, or 28.47% of the subcontracts awarded during the study period, representing \$21,531,198 or 42.94% of the subcontract dollars.

Native Americans received 3, or 1.09% of the subcontracts awarded during the study period, representing \$70,183, or 0.14% of the subcontract dollars.

Caucasian Females received 50, or 18.25% of the subcontracts awarded during the study period, representing \$9,457,673 or 18.86% of the subcontract dollars.

Non-minority Males received 47, or 17.15% of the subcontracts awarded during the study period, representing \$5,606,274, or 11.18% of the subcontract dollars.



**Table 11.8: Utilization of Certified SBE Subcontractors,
All Industries, October 1, 2013 to September 30, 2018**

Ethnicity	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American	54	19.71%	\$5,060,419	10.09%
Asian-Pacific American	18	6.57%	\$1,558,995	3.11%
Subcontinent Asian American	24	8.76%	\$6,862,553	13.68%
Hispanic American	78	28.47%	\$21,531,198	42.94%
Native American	3	1.09%	\$70,183	0.14%
Caucasian Females	50	18.25%	\$9,457,673	18.86%
Non-minority Males	47	17.15%	\$5,606,274	11.18%
TOTAL	274	100.00%	\$50,147,296	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	18	6.57%	\$1,984,696	3.96%
African American Males	36	13.14%	\$3,075,723	6.13%
Asian-Pacific American Females	2	0.73%	\$323,247	0.64%
Asian-Pacific American Males	16	5.84%	\$1,235,748	2.46%
Subcontinent Asian American Females	3	1.09%	\$2,544,851	5.07%
Subcontinent Asian American Males	21	7.66%	\$4,317,702	8.61%
Hispanic American Females	14	5.11%	\$3,408,250	6.80%
Hispanic American Males	64	23.36%	\$18,122,948	36.14%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	3	1.09%	\$70,183	0.14%
Caucasian Females	50	18.25%	\$9,457,673	18.86%
Non-minority Males	47	17.15%	\$5,606,274	11.18%
TOTAL	274	100.00%	\$50,147,296	100.00%

The utilization analysis of certified SBEs as subcontracts on construction and professional services prime contracts combined revealed that Hispanic Americans received most of the subcontract dollars. When the utilization of certified SBE subcontractors was compared to the percent of certified SBEs, disparity was found for African Americans. The disparity analysis of all certified SBE subcontractors utilized in the two industries combined is described by ethnicity and gender in Table 11.9.



**Table 11.9: SBE Certified Subcontractor Utilization, All Industries,
October 1, 2013 to September 30, 2018**

Group	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American	10.09%	31.85%	\$5,060,419	\$15,972,842	-\$10,912,423	0.32	< .05 *
Asian-Pacific American	3.11%	3.06%	\$1,558,995	\$1,532,278	\$26,717	1.02	**
Subcontinent Asian American	13.68%	5.83%	\$6,862,553	\$2,925,259	\$3,937,294	2.35	**
Hispanic American	42.94%	23.06%	\$21,531,198	\$11,561,738	\$9,969,461	1.86	**
Native American	0.14%	1.30%	\$70,183	\$650,058	-\$579,874	0.11	not significant
Caucasian Females	18.86%	12.13%	\$9,457,673	\$6,082,681	\$3,374,991	1.55	**
Non-minority Males	11.18%	22.78%	\$5,606,274	\$11,422,440	-\$5,816,166	0.49	**
TOTAL	100.00%	100.00%	\$50,147,296	\$50,147,296			
Ethnicity and Gender	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
African American Females	3.96%	10.83%	\$1,984,696	\$5,432,624	-\$3,447,927	0.37	< .05 *
African American Males	6.13%	21.02%	\$3,075,723	\$10,540,219	-\$7,464,496	0.29	< .05 *
Asian-Pacific American Females	0.64%	0.56%	\$323,247	\$278,596	\$44,651	1.16	**
Asian-Pacific American Males	2.46%	2.50%	\$1,235,748	\$1,253,682	-\$17,934	0.99	not significant
Subcontinent Asian American Females	5.07%	1.48%	\$2,544,851	\$742,923	\$1,801,928	3.43	**
Subcontinent Asian American Males	8.61%	4.35%	\$4,317,702	\$2,182,336	\$2,135,366	1.98	**
Hispanic American Females	6.80%	4.81%	\$3,408,250	\$2,414,499	\$993,751	1.41	**
Hispanic American Males	36.14%	18.24%	\$18,122,948	\$9,147,238	\$8,975,710	1.98	**
Native American Females	0.00%	0.37%	\$0	\$185,731	-\$185,731	0.00	----
Native American Males	0.14%	0.93%	\$70,183	\$464,327	-\$394,144	0.15	----
Caucasian Females	18.86%	12.13%	\$9,457,673	\$6,082,681	\$3,374,991	1.55	**
Non-minority Males	11.18%	22.78%	\$5,606,274	\$11,422,440	-\$5,816,166	0.49	**
TOTAL	100.00%	100.00%	\$50,147,296	\$50,147,296			
Minority and Females	Utilization	Availability	Actual Dollars	Expected Dollars	Difference	Disp. Ratio	P-Value
Minority Business Enterprises	69.96%	65.09%	\$35,083,349	\$32,642,175	\$2,441,174	1.07	**
Woman Business Enterprises	35.33%	30.19%	\$17,718,718	\$15,137,054	\$2,581,664	1.17	**

(*) denotes a statistically significant underutilization.

(†) denotes a statistically significant overutilization.

(**) this analysis does not test statistically the overutilization of certified SBEs.

(----) denotes an underutilized group with no contracts awarded, too few contracts awarded, or too few available firms to test statistical significance.

African American SBE certified businesses were underutilized as prime contractors at a statistically significant level. Based on the percent of African American businesses certified as SBEs, the group was expected to receive \$20,935,539. The disparity analysis revealed that the difference between what SBE certified African American businesses were expected to receive based on their availability was \$4,602,225.

At the subcontract level, the difference between what SBE certified African American businesses were expected to receive based on their availability was \$15,972,842.

While the robust and innovative SBE Program achieved parity in the utilization of most M/WBEs, the findings for construction, professional services, and goods and services prime contracts, documented that certified SBE African American businesses are underutilized at a statistically significant level. Additionally, certified SBE African American subcontractors were also underutilized at a statistically significant level in construction and professional services. Both the SBE disparity analysis and the non-SBE disparity analysis indicate that the SBE Program has been ineffective in achieving equitable participation for African American prime contractors and subcontractors based on their availability in METRO's market area.



IV. Race and Gender Specific Recommendations

Race and gender-specific requirements should be considered to address the disparity in the award of prime contracts and subcontracts to the available minority and woman-owned businesses.

A. Prime Contract Remedies

1. Incentive Credits for Professional Services Contracts

Incentive credits should apply when the selection process includes a request for proposal or statement of qualifications. The evaluation points should be assigned when ranking proposals and statements of qualifications. Incentive credits could offset the competitive disadvantage evidenced by the groups that were underutilized at a statistically significant level. Incentive credits of 10 percent of the maximum points should be specified in the published evaluation criteria and applied in the evaluation process for formal professional services contracts. The groups that are eligible for incentive credits are listed in Table 11.10.

Table 11.10: Groups Eligible for Professional Services Prime Contractor Incentive Credits

Incentive Credit – Eligible Groups
Professional Services
African Americans
Subcontinent Asian Americans
Hispanic Americans
Caucasian Females

2. Bid Discounts

A five (5) percent bid discount should apply for evaluation purposes on construction and goods and services low bid prime contracts. The discount should not exceed \$50,000. When applied, the bid discount would reduce the bidder's price by five (5) percent for evaluation purposes. The groups eligible for the bid discount are listed in Table 11.11.



Table 11.11: Groups Eligible for Construction and Goods and Services Bid Discounts

Bid Discount Eligible Groups
Goods and Services
African Americans
Asian Pacific Americans
Subcontinent Asian Americans
Hispanic Americans
Caucasian Females
Construction Services
African Americans
Subcontinent Asian Americans
Hispanic Americans
Caucasian Females

B. Subcontract Remedies

1. Subcontract Goals

A subcontract goal should be set on construction and professional services solicitations for African Americans and Caucasian females. The goal should not exceed the group's availability. Table 11.12 below depicts the construction and professional services subcontractor availability documented in the Study.

Table 11.12: Subcontractor Availability

Ethnic Group	Construction Availability Percentage	Professional Services Availability Percentage
African American	17.39%	19.08%
Caucasian Females	10.98%	11.78%

The suggested race and gender-specific goals, in combination with the enhanced race and gender-neutral program elements, should facilitate the attainment of greater African American and Caucasian Female participation and eliminate the documented disparity. It is therefore recommended that the subcontract goals be equal to availability of the eligible groups.

2. Implement Quantified Good Faith Effort Criteria

When applying M/WBE subcontracting goals, METRO must implement good faith effort requirements to satisfy the legal standards set forth in *Croson*. A value should be assigned to each good faith effort criterion to quantify the assessment of the goal attainment. A prime contractor should achieve a minimum score of 80 points to demonstrate a bona fide good faith effort. In the event the prime contractor is unable to meet the subcontract goal, a good faith effort waiver form with an explanation of the efforts undertaken to meet the goal should be submitted. If the



determination is made that a good faith effort was not undertaken, the bidder should be deemed non-responsive, and the goal attainment of the next lowest bidder should be reviewed. The good faith elements and recommended point assignments are:

- Advertising (5 points)

Effort: Prime contractors should advertise opportunities for M/WBEs at least two weeks prior to bid opening through reasonable means, such as attendance at pre-bid meetings, advertising, and written notices. Contractors should be required to publish these opportunities in the general circulation media, minority-focused media, or trade-related publications at least twice unless the METRO waives this requirement due to time constraints.

Documentation: The advertisement shall include the name and location of the project, location where plans and specifications can be viewed, subcontractor proposal due date, and items of work or specialties being solicited.

- Bidders Outreach to Identify M/WBEs (15 points)

Effort: Prime contractors should attempt to contact M/WBEs through personal, frequent, and persistent contact. The contractor is required to promptly return phone calls, and emails.

Documentation: Prime contractors should provide a list of the names of the organizations or firms, persons contacted, and the dates of contact. They should also include copies of correspondence received from any organization or firm responding to the bidder's solicitation or initiating contact for the purpose of seeking subcontracting work. The contractor must contact at least three (3) firms/organizations or an amount sufficient to reasonably result in a viable subcontract.

Bidders must submit documentation of good faith efforts to contract with or to purchase significant material supplies from eligible firms within 48 hours of the bid opening. If a contractor or bidder fails to meet specified goals in the bid documents, METRO must determine that the contractor has complied with all requirements of the solicitation documents and has made the required good faith effort.

- Attending the Pre-bid Meeting (5 points)

Effort: Attendance should be mandatory to comply with the good faith effort requirement. However, attendance may be optional if the participation goal is met.

Documentation: The contractor or the representative's name on the pre-bid meeting sign-in sheet and representative presence at the pre-bid meeting shall serve as documentation.

- Providing Timely Written Notification (30 points)

Effort: Prime contractors should solicit subcontract bids and material quotes from relevant eligible businesses in writing at least two weeks prior to bid opening. Relevant firms are those that could



feasibly provide the services or supplies required for completing the scope of services provided in the bid document. In soliciting sub-bids, quotes, and proposals, the contractor will furnish the following information:

- Contractor's name, address, and telephone number.
- Project location and description.
- Solicited items of work services to be subcontracted or materials purchased, including a specific description of the work involved.
- Place where bid documents, plans, and specifications can be reviewed.
- Contractor representative to contact if more information is needed.
- Date and time when subcontractor/supplier quotes must be received by the contractor.

Documentation: Written notification must include verification of transmission date. Such verification may include copies of certified mail-return receipts, emails, and automated facsimile journals.

- Contact Follow-up (10 points)

Effort: Prime contractors should return phone calls, facsimiles, and emails promptly after the initial solicitation at least two weeks prior to bid opening. The follow-up should take the form of a phone call, facsimile, or email during normal business hours. Such contact shall be within a reasonable amount of time to allow the prospective subcontractor an opportunity to submit a competitive sub-bid.

Documentation: The list of subcontractors who were contacted by telephone, including results of that contact, should be documented with a telephone log, email print-out, automated facsimile journal or facsimile transmittal document. Included should be names of the eligible businesses, telephone numbers, contact persons, and dates of contact.

- Identifying Items of Work (10 points)

Effort: Prime contractors' subcontracts should be broken down into discrete items or packages that market area M/WBEs may find economically feasible to perform. Smaller portions of work or other assistance that could reasonably be expected to produce a level of participation sufficient to meet the goals should be offered to eligible prospective subcontractors. Prime contractors should not deny a subcontract to a qualified and competitive M/WBE solely because the M/WBE cannot perform the entire package unless unbundling would jeopardize scheduling or increase costs by more than five (5) percent.

Documentation: The list of the specific items of work solicited, including identification of eligible firms, in which such work was solicited.



- Negotiating in Good Faith (15 points)

Effort: Prime contractors should negotiate fairly with interested M/WBEs even if the selection of the M/WBE would increase costs. A contractor should not unjustifiably reject sub-bids, quotes, and proposals prepared by eligible businesses. However, METRO should afford the contractor to choose a low bid if two or more quotes are received.

Documentation: Provide written statements of the names, addresses, and telephone numbers of subcontractors contacted by the contractor to negotiate prices or services. Include dates of the negotiations and the results. Document the quotes/proposals received from the eligible businesses. Lack of qualifications or significant price difference of five (5) percent or more will be considered just cause for rejecting eligible businesses. Proof of price differential must be made available to METRO.

- Offer Assistance in Financing, Bonding, Insurance, or Mentoring (10 points)

Effort: Prime contractors should provide M/WBEs technical assistance with plans, specifications, and requirements of the contract in a timely manner to respond to a solicitation. In addition, the contractor should also advise and make efforts to assist interested businesses in obtaining bonds, lines of credit, or insurance required by METRO, where applicable. A prime contractor may also receive 10 points for good faith effort by offering mentoring assistance.

Documentation: Provide written statements of the type of assistance offered. The contractor shall provide the name, contact person, and telephone number of the bonding company or financial institution offering assistance.

To claim points for mentoring, the prime contractor must submit a mentoring plan that is subject to METRO's approval for one or more of the eligible businesses included as a subcontractor for the project. The mentoring plan outcomes should enhance capability to bid projects as a prime contractor and new skills in estimating projects, completing project schedules, hiring subcontractors, acquiring additional licenses or certification, accessing capital, and increasing bonding capacity.

V. Procedures to Implement Remedies for M/WBEs

An augmented SBE Program staff is needed to effectively implement the procedures recommended to remedy the prime contractor and subcontractor race and gender-conscious remedies. Recommended procedures also include an M/WBE certification process, M/WBE Program Manual, and department-wide M/WBE Program training.

1. Require Goal Attainment at Bid Opening

METRO's SBE Program requires goal attainment at bid opening. The requirement should apply to the M/WBE Program, as well. To ensure the integrity of the goal attainment process, the prime contractor that fails to meet the contract goal must submit good faith effort documentation with



the bid or proposal. If the good faith effort documentation is not submitted or the documentation is not approved, the submittal should be considered non-responsive. If no bids are found to be responsive, the solicitation should be cancelled and re-advertised.

2. M/WBE Certification Requirements

Certification is important to ensure the integrity of the M/WBE program. It determines the eligibility to participate in the M/WBE program's race and gender-based remedies. METRO should accept reciprocal certification. Only entities that perform both desk and site reviews to verify the owner's ethnicity, gender, and control of the business operations should be granted reciprocal status. When granting reciprocal status, METRO should reserve the right to audit the certification process for compliance with its standards.

3. Verification of Commercially Useful Function

The determination of the certified businesses can perform a commercially useful function must be made at the time of bid opening. Services should be considered real and actual if such services would be provided in the normal course of conducting business or trade activities. The contractor must perform a distinct element of work which the business has the skill and expertise as well as the responsibility of actually performing, managing, and supervising.

The responsibility for demonstrating that the listed M/WBEs can perform a commercially useful function is the sole responsibility of the prime contractor. The commercially useful function requirement should apply to all procurement activity, including change orders, substitutions, and task orders. A business that performs a commercially useful function minimally does the following:

- Executes a distinct element of the contract scope of work.
- Carries out its obligations by performing, managing, and supervising the assigned 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
- Completes its scope of work and does not further subcontract portions of the work greater than that expected to be subcontracted by normal industry standards

4. M/WBE Quarterly Participation Report

The report should document the attainment of the construction and professional services subcontract goals and utilization of M/WBE prime contractors. To compile the reports, each prime contractor should be required to complete, with the bid or proposal, a subcontractor utilization form listing all subcontractors, suppliers, and truckers to be used on the contract. The information should be recorded in the SBE Program's compliance system. Each invoice should list the cumulative payment to each listed contractor and be recorded in the compliance system.

All approved substitutions or other modifications to the listed subcontractors should be approved and recorded in the SBE Program compliance system. A utilization review to measure the



effectiveness of the M/WBE Program should be performed quarterly by analyzing the prime contract and subcontract awards by ethnicity, gender, and industry. The report should be presented to METRO's Board of Commissioners at quarterly intervals and published on METRO's website.

Minimally, the report should document: 1) year-to-date payments, 2) original award amounts, 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. Finally, the report should include the M/WBE Business Advisory Council's comments and METRO's exemplary practices and achievements.

5. Assess Penalties for Failing to Achieve M/WBE Subcontract Goals

Contract compliance reviews should occur throughout the term of the contract to ensure that M/WBEs perform the subcontract work. Monetary penalties should be levied on prime contractors that fail to meet the M/WBE goals. METRO should monitor payments monthly and request documentation of MBE and WBE final payments. The penalty should equal the M/WBE goal shortfall. As appropriate, it should be assessed during the project close-out and be withheld from the prime contractor's final payment.

6. M/WBE Program Training Manual

An M/WBE Program Training Manual should be developed to standardize the application of the program across METRO's departments. The manual should describe the program's mission, policy, and procedures. The training manual should be made available to all staff in an electronic format and be downloadable from the M/WBE Program's webpage. The requirements set forth in the manual should act as standard operating procedures for each department. The training manual would also provide staff with clear guidance on their responsibilities to track and report the participation of M/WBEs. The components of the program that are integral to the procurement process should also be incorporated in the procurement training and manual.

7. Develop Department-wide Program Training

The M/WBE Program Training Manual should also be used for department-wide training purposes. The annual training should provide background on the M/WBE Program, its policies, and its objectives. Managers and departmental staff should be required to attend the training to ensure uniform application of the program standards. The training module should also be included in new employee onboarding efforts.



8. Enhance SBE and M/WBE Outreach and Marketing Strategies

METRO's outreach and marketing strategies to support its SBE Program should be expanded to promote the M/WBE program requirements, procedures, goals, and objectives. Table 11.13 lists strategies and tactics that METRO should employ to market the M/WBE Program.

Table 11.13: Subcontractor Availability

Strategy	Tactics
Design logo and tagline and produce banner display	<ul style="list-style-type: none"> Develop logo and tagline. Produce banner with placement of existing logo and new tagline for outreach events.
Define design standards and layout for a uniform appearance of procurement documents	<ul style="list-style-type: none"> Revise all procurement materials to include the program logo and tagline for documents to have a uniform appearance.
Develop collateral print material for outreach campaign	<ul style="list-style-type: none"> Produce digital brochure to communicate program changes. Develop articles and press kits.
Launch outreach campaign	<ul style="list-style-type: none"> Distribute press kits and press releases. Place public service announcements. Pitch campaign to broadcast and print media.
Host semi-annual contractors' open house and other networking events	<ul style="list-style-type: none"> Plan and coordinate open house events. Distribute invitations by mail, email, and tweets. Include procurement department in outreach events. Publicize informal contract opportunities. Distribute contract forecasts and certification forms.
Distribute forecasts to targeted businesses	<ul style="list-style-type: none"> Post forecasts on the website. Distribute forecasts through email, Facebook, Twitter, and text alerts.
Partner with agencies and organizations to disseminate program information	<ul style="list-style-type: none"> Continue current agency partnerships. Expand local business and trade associations group partnerships to include veterans and disabled persons groups.
Conduct an annual program impact and outcome evaluation	<ul style="list-style-type: none"> Establish measurable outcomes. Conduct business satisfaction surveys. Examine bidding history, subcontract goal attainment, and prime contract utilization of M/WBEs, veterans and disabled persons by department.



9. Augment M/WBE Program Staff

Adequate staff is required to effectively support the additional responsibilities of an M/WBE Program. The augmented staff should include personnel with the knowledge, skills, and ability to implement the complex requirements of a comprehensive M/WBE Program supported with technology. Below are descriptions of the additional staff roles:

Executive Staff:

- **Manager, SBE/M/WBE Program** provides direction and leadership in the development of programs and services which advance opportunities for growth of M/WBEs. The current SBE Program Manager should have the authority to manage the M/WBE Program and direct the office staff to ensure that user departments comply with program requirements. The manager's responsibilities should also be extended to being a voting member of the evaluation panel for proposal and statements of qualifications.

Technical Staff:

- **Contract Compliance Manager:** assists the program manager in managing the M/WBE Program, oversees pre-award compliance with the M/WBE Program requirements stipulated in the solicitation, and monitors post-contract compliance to ensure that the contract provisions are adhered to during the term of the contract. The Contract Compliance Manager must demonstrate proficiency in Microsoft Office Suite, knowledge of construction and construction-related procurement processes, and the ability to work with a variety of individuals with diverse interests and backgrounds.
- **Certification Analysts:** process certification applications and advise applicants on the requirements to complete the process. Conduct desk audits to review certification-related documents, and perform site visits, and participate in business outreach activities to increase the number of certification applications submitted. Certification analysts must demonstrate proficiency in Microsoft Office Suite, business audits, knowledge of construction and construction-related procurement processes, and the ability to work with individuals with diverse interests and backgrounds.
- **Contract Compliance Specialist:** monitors M/WBE contract compliance and M/WBE contractor and subcontractor project participation, investigates complaints, ensures contracts are properly and legally executed, and creates a profile of each contractor by preparing a site visit report. The contract compliance specialist must demonstrate proficiency in Microsoft Office Suite, knowledge of construction and construction-related procurement processes, the ability to work with public officials and the public, and the ability to work with a variety of individuals with diverse interests and backgrounds.
- **Data Analyst:** compiles, verifies, and reports data measuring the user department's compliance with the contract goals and monitoring requirements. The data analyst manages the data management system to ensure the reports required to measure compliance with M/WBE Program requirements are generated on schedule. Demonstrate proficiency in

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Microsoft Office Suite; knowledge of databases, design, data collection, and manipulation; and the ability to work with a variety of individuals with diverse interests and backgrounds is another critical requirement.

- **Ombudsperson:** provides dispute resolution services and direct investigations of complaints from user departments, as well as prime contractors and subcontractors. The ombudsperson must demonstrate proficiency in Microsoft Office Suite, knowledge of legal and mediation training methods and construction and construction-related procurement processes, and the ability to work with a variety of individuals with diverse interests and backgrounds.

10. M/WBE Advisory Committee

METRO should establish a M/WBE Advisory Committee to assist in the launch and support of the M/WBE Program. The committee should monitor the effectiveness of the M/WBE Program and make recommendations. The committee should function as an advocate for M/WBEs and small businesses to:

- Facilitate access to contracting opportunities for M/WBEs and other small businesses.
- Promote and advance M/WBE participation as prime contractors and subcontractors.
- Identify enhancements to the contract opportunity notification process.

Members should be appointed by METRO's Board of Commissioners and serve a three- year term. The committee's members and guidelines should be published on METRO's SBE/M/WBE Program webpage.

VI. Race and Gender-Neutral Recommendations

These recommendations are offered to strengthen the SBE Program, implement the proposed M/WBE Program, and improve METRO's effectiveness in eliminating the statistically significant underutilization of M/WBEs documented in the Study.

A. Administrative Strategies

1. Revise Bonding Requirements

METRO does not require bonds on construction projects estimated at \$25,000 and under. The bond waiver amount should be increased to \$100,000 to maximize the participation of M/WBE prime contractors on METRO's construction contracts.



2. Revise Insurance Requirements

Insurance requirements on all contracts under \$1,000,000 should be evaluated to ensure that the coverage is not disproportionate to METRO's exposure. Excessive insurance requirements on small contracts can be a disincentive to M/WBE and SBE bidders.

3. Provide Adequate Lead Time When Advertising Solicitations

To maximize M/WBE participation, METRO should ensure that solicitations are advertised with sufficient time to prepare a competitive response. Currently, competitive solicitations are advertised in the *Houston Chronicle* for no less than once a week for two consecutive weeks before the bid due date. The solicitation is also posted on METRO's website and in the Procurement Plan Room. The advertisement may also be placed in a national publication before the bid due date with written approval by the Chief Procurement Officer.

Notice of contract opportunities should be published at least four (4) weeks before the bids are due to provide adequate time for businesses that are not current contractors. Solicitations should be published on the same day(s) each month. Longer lead times would allow businesses sufficient time to address questions and concerns about the solicitation and permit prime contractors to solicit bids and proposals from subcontractors.

The good faith effort provisions of the M/WBE Program require bidders to publish a solicitation for subcontractors at least seven (7) days before the bid is due. Compliance with this condition also requires sufficient lead time for the prime contractor to comply and prepare a response. In addition to published announcement in *The Houston Chronicle*, the bid notice should be disseminated to M/WBEs through Twitter and text alerts.

Sufficient lead time would allow prime contractors to search and contact M/WBE subcontractors to meet contracting goals, and subcontractors would have sufficient lead time to prepare their response. Prime contractors should be required to allow at least five (5) business days for M/WBE subcontractors to submit their bids and statements of qualifications.

4. Expand Solicitation Notification Media Sources

Print media is increasingly being replaced by digital media. Accordingly, publishing solicitations in only print media and trade publications is not the most effective means to reach M/WBEs. Furthermore, searching for bid opportunities in print media is time-consuming and tedious. Email, Twitter™, and text alerts could reach more M/WBEs and should be a standard method of communication. Publication in M/WBE chambers and trade associations media should also be required. Electronic communication mediums should be updated and maintained by the M/WBE Program.



5. Unbundle Large Procurements into Smaller Contracts

Large projects should be unbundled, when feasible and the use of master agreements should be reviewed to limit the bundling of small projects. The use of master agreements to award small projects reduces the number of contracts available for M/WBE and small contractors to bid as prime contractors. Additionally, the requirements to qualify for a master agreement is exceedingly higher than the capacity needed to perform most of the projects assigned under a master agreement.

Given the geographic market area's ever increasing small business population, attention to the size of solicitations is simply good business. In addition, the Study revealed that a few contractors received most of the large and small contract dollars METRO expended during the study period:

- Seven of the 117 construction prime contractors received 70% of the dollars.
- Eleven of the 325 professional services prime contractors received 70% of the dollars.

Unbundling procurements could bring more opportunities within reach of more businesses as prime contractors, which would result in more bidders for METRO contracts. And it would redistribute the dollars METRO expends to more local businesses.

Bundling in one large contract occurs when various goods or services that could be purchased individually are grouped together into a single solicitation. Bundling also occurs when projects that are on separate sites—or on discrete areas of the same site—are included in one solicitation. In determining whether a large solicitation should be unbundled, the following criteria should be considered:

Whether or not the project takes place in more than one location.

- Size and complexity of the procurement.
- Similarity of the services procured.
- Sequencing and delivery of the work.
- Public safety issues and convenience.
- Size of the task orders issued against the procurement.

A multi-year agreement is an additional example where multiple projects, which may not be small are bundled without being advertised. In addition, purchase orders for goods and services issued against a price agreement are customarily for small items.

6. Use Direct Contracting to Award Small Contracts



Direct contracting is a procurement method that awards separate contracts for specialty or non-license services which might otherwise be included as an item of work in a large construction contract or within the scope of a large architecture and engineering contract. Using the direct contracting procurement method would increase the opportunities for, and build the capacity of, small businesses. Direct contracting allows small businesses to work as prime contractors on a greater variety of contracts.

In the construction industry, trucking, demolition, surveying, and landscaping are services that could be awarded as direct contracts instead of items of work in a general construction contract. Design services, which are not required to be performed by a licensed engineer, architect, or registered surveyor, might also be awarded as direct contracts. These services include planning, environmental assessments, ecological services, cultural resource services, traffic studies and testing services. If these professional services specialties were separated from large design contracts and awarded as prime contracts, it would increase opportunities for M/WBEs to be prime contractors on more contracts.

7. Pay Mobilization to Subcontractors

Under circumstances where 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 their subcontract work. To ensure transparency, subcontractors should be notified when prime contractors receive the mobilization payment from METRO. Notification should be provided through facsimile or email.

The prime contractor should be required to submit proof of mobilization payments to subcontractors. The information should also be posted on METRO's website. For subcontractors, project start-up costs can also be significant. A subcontractor that has limited resources and access to credit may find that start-up expenses inhibit its ability to bid on METRO subcontracts.

8. Give Five-Day Notice of Invoice Disputes

Invoice disputes are a source of delayed invoice payments. While METRO has informal means to resolve payment disputes, the dispute resolution process should be formalized. Within five (5) days of receiving a disputed invoice, METRO 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 receiving a disputed invoice and pay the subcontractor within five (5) days of receiving payment from METRO. METRO's payments to the prime contractor should be withheld if the subcontractor is not paid in a timely manner for work performed and invoiced.



B. Supportive Services

Supportive services offered by METRO to assist small, minority, and women-owned businesses should be expanded. They include the following:

1. Enhance Networking Opportunities

METRO's messaging should target M/WBEs by advertising networking opportunities through regular email updates, trade associations, other agency publications, and posts on ethnic media and platforms. METRO should advertise the events with adequate advance notice.

METRO could also sponsor marketing forums to allow M/WBEs to deliver technical presentations directly to METRO managers. The forums should be topical and held on a quarterly basis. METRO personnel should invite M/WBEs to make presentations directly to staff. The outreach materials should provide sufficient details to inform interested businesses of the opportunity to make a presentation at the forum. The forums would allow M/WBEs to become more familiar with the procurement process and department management staff. The forums would also provide a means to increase METRO staff's knowledge of the goods and services offered by M/WBEs.

2. Create a Listserv™ to Communicate with Certified Businesses

METRO should employ an electronic mailing list software, such as Listserv™, that can send targeted emails to certified M/WBEs that have expressed an interest in METRO's upcoming contracts and contract forecasts. An electronic mailing list can disseminate low-cost communications to M/WBEs, ensuring that communication occurs on a regular basis. The database can be easily updated to include M/WBEs as they are certified.

C. Contract Monitoring and Reporting

1. Track and Monitor Prime Contracts and Subcontracts

To ensure the integrity of the M/WBE program prime contract and subcontract awards, payments to both M/WBEs and non-minority male businesses must be monitored throughout the term of the contract. An assessment of METRO's data management process revealed the need for system improvements to effectively implement this recommendation.

Subcontractors, suppliers, and truckers listed on all contracts should be recorded in METRO's SBE/M/WBE contract compliance system, and all substitutions should also be recorded. Monthly contract compliance monitoring should be conducted to ensure that the M/WBE participation listed in bids, proposals, and statements of qualifications is achieved. After the contract is awarded, regular compliance monitoring should verify the prime contractor's post-award subcontracting levels. Comprehensive and routine contract compliance monitoring would minimize unauthorized substitutions and late payments.

The following contract compliance monitoring methods are recommended:



- Track in the SBE/M/WBE compliance system all M/WBEs and non-M/WBE male subcontractors, suppliers, and truckers.
- Verify the ethnicity and gender reported by contractors in the SBE/M/WBE compliance system.
- Perform job site visits to monitor actual subcontractor participation.
- Verify a commercially useful function (CUF) is performed by listed SBE and M/WBE subcontractors.

METRO should also track the ethnicity and gender of all contractors awarded either a prime contract or subcontract. All vendors should be required to complete a vendor registration form before a contract is awarded and record their subcontractors in the system at contract award and any modifications to the original list.

VII. Veteran and Disabled-owned Business Enterprises

As discussed in *Chapter 1: Legal Analysis*, programs that do not involve race are not subject to the strict scrutiny legal review, to which race-based programs are subject. The relevant standard of review applied to remedial programs that are not based on race is the rational basis standard. To survive a constitutional challenge under a rational basis review, the government need only demonstrate that its action or program is rationally related to a legitimate government interest.²⁹³ METRO's desire to foster business development for veteran-owned and service-disabled veteran-owned business enterprises (VOBEs and SDVOBEs) and persons with disability-owned business enterprises (PDOBEs) by maximizing their participation on its construction, professional services, and goods and services contracts satisfies the rational basis review.

A. Veteran-owned Business Enterprises and Persons with Disability-owned Business Enterprises Availability and Utilization Analyses

METRO is committed to increase the participation of veteran and service disabled-owned businesses and businesses owned by persons with disabilities. Outreach should be targeted VOBES and PDOBEs to achieve this goal. Lists of both VOBES and PDOBEs should be maintained by METRO and updated with businesses identified through focused outreach to media, trade, and professional organizations. The lists should serve as a baseline dataset and should be regularly augmented and updated to ensure the contact information is current and complete. Timely and targeted distribution of solicitations should include businesses on these lists.

1. Veteran-owned Business Enterprise Availability Analysis

The availability of VOBES domiciled in Harris County were identified from sources published by four agencies:

²⁹³ *Armour v. City of Indianapolis, Ind.*, 132 S. Ct. 2073, 2080 (2012) (quoting *Heller v. Doe*, 509 U.S. 312, 319–320 (1993)).



- Coupa Suppliers -- Service-Disabled Veteran-owned Small Business Enterprise, Texas Directory
- Coupa Suppliers – Veteran-owned Business Texas Directory
- Veteran Business-owned Enterprises, South Central Texas Regional Certification Agency
- Veteran-owned Businesses, Texas Veterans Owned Business Directory
- Veteran-owned Business Enterprises, U.S. Small Business Administration, Houston District Office

The ethnicity and gender of the VOBs domiciled in Harris County was determined by internet research. Table 11.14 depicts the available VOBs in Harris County by ethnicity, gender, and industry. African American and Non-Minority Males represent the majority of VOBs in Harris County in each industry. There were no available Asian Subcontinent American VOBs in either construction or professional services.

Table 11.14: Available VOBs in Harris County, by Industry

Ethnicity/Gender	Construction VOBs	Professional Services VOBs	Goods and Services VOBs
African Americans	24.05%	40.59%	37.66%
Asian-Pacific Americans	3.80%	1.49%	0.87%
Asian Subcontinent Americans	0.00%	0.00%	0.43%
Hispanic Americans	13.92%	12.38%	8.66%
Native Americans	3.80%	1.98%	3.03%
Caucasian Females	2.53%	1.98%	3.03%
Non-Minority Males	51.90%	41.58%	46.32%

2. Veteran-owned Business Enterprise Utilization Analysis

Utilization of the enumerated VOBs as METRO prime contractors during the study period is described in this section. The VOB utilization findings are presented by industry, ethnicity, and gender.

a. Construction Services

The utilization analysis revealed that Hispanic Americans and Non-Minority Males were the only certified VOBs that received construction prime contracts. Hispanic American VOBs receive 1.85% or \$2,211,409 of the construction dollars. Non-Minority Male VOBs received 0.25% or \$297,470 of the construction dollars.



Table 11.15: Construction Non-VOBE and VOB Utilization

Ethnicity/Gender	Non-VOBE Firms				VOBE Firms			
	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	49	8.42%	\$9,452,646	7.91%	0	0.00%	\$0	0.00%
Asian-Pacific Americans	0	0.00%	\$0	0.00%	0	0.00%	\$0	0.00%
Asian Subcontinent American	8	1.37%	\$2,442,000	2.04%	0	0.00%	\$0	0.00%
Hispanic Americans	62	10.65%	\$6,097,004	5.10%	3	0.52%	\$2,211,409	1.85%
Native Americans	0	0.00%	\$0	0.00%	0	0.00%	\$0	0.00%
Caucasian Females	36	6.19%	\$2,111,003	1.77%	0	0.00%	\$0	0.00%
Non-Minority Males	395	67.87%	\$96,922,937	81.08%	29	4.98%	\$297,470	0.25%
TOTAL	550	94.50%	\$117,025,590	97.90%	32	5.50%	\$2,508,879	2.10%

b. Professional Services

The utilization analysis revealed that African Americans and Non-Minority Males were the only certified VOBs that received professional services (including architecture and engineering services) prime contracts. African American VOBs receive 0.04% or \$59,100 of the professional services dollars. Non-Minority Male VOBs received 0.34% or \$562,003 of the professional services dollars.

Table 11.16: Professional Services Non-VOBE and VOB Utilization

Ethnicity/Gender	Non-VOBE Firms				VOBE Firms			
	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	26	3.05%	\$726,716	0.44%	3	0.35%	\$59,100	0.04%
Asian-Pacific Americans	24	2.82%	\$2,467,219	1.48%	0	0.00%	\$0	0.00%
Asian Subcontinent Americans	5	0.59%	\$1,547,647	0.93%	0	0.00%	\$0	0.00%
Hispanic Americans	52	6.10%	\$15,225,427	9.16%	0	0.00%	\$0	0.00%
Native Americans	1	0.12%	\$3,779	0.00%	0	0.00%	\$0	0.00%
Caucasian Females	55	6.46%	\$5,470,007	3.29%	0	0.00%	\$0	0.00%
Non-Minority Males	682	80.05%	\$140,123,189	84.32%	4	0.47%	\$562,003	0.34%
TOTAL	845	99.18%	\$165,563,983	99.63%	7	0.82%	\$621,103	0.37%

c. Goods and Services

The utilization analysis revealed that Hispanic Americans and Non-Minority Males were the only certified VOBs that received goods and services prime contracts. Hispanic American VOBs receive 0.54% or \$1,694,684 of the goods and services dollars. Non-Minority Male VOBs received 0.05% or \$147,619 of the goods and services dollars.



Table 11.17: Goods and Services Non-VOBE and VOB E Utilization

Ethnicity/Gender	Non-VOBE Firms				VOBE Firms			
	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	675	1.81%	\$10,961,083	3.50%	0	0.00%	\$0	0.00%
Asian-Pacific Americans	178	0.48%	\$13,082,241	4.18%	0	0.00%	\$0	0.00%
Asian Subcontinent Americans	36	0.10%	\$233,107	0.07%	0	0.00%	\$0	0.00%
Hispanic Americans	721	1.93%	\$14,207,799	4.54%	58	0.16%	\$1,694,684	0.54%
Native Americans	15	0.04%	\$151,959	0.05%	0	0.00%	\$0	0.00%
Caucasian Females	1,953	5.22%	\$8,643,174	2.76%	0	0.00%	\$0	0.00%
Non-Minority Males	33,738	90.25%	\$263,641,802	84.29%	10	0.03%	\$147,619	0.05%
TOTAL	37,316	99.82%	\$310,921,164	99.41%	68	0.18%	\$1,842,303	0.59%

The utilization analysis revealed that VOB E s represent 2.56% of the total construction contractors, 0.92% of the professional services contractors, and 0.62% of the total goods and services contractors. Although VOB E s are available in all industries, they were underutilized based on their availability. It is anticipated that the utilization of VOB E s will increase notably with the launch of a targeted outreach program using the compiled availability sources.

3. Persons with Disability-owned Business Enterprises Availability Analysis

Extensive research was undertaken to identify certified PDOB E s in Harris County that were not listed in a disabled veterans directory. The City of Houston's Persons with Disabilities Business Enterprises Certification Directory is the only certified list of disabled person-owned businesses identified in the State of Texas.

The City of Houston's PDOB E certification requires applicants to submit a Disability Affidavit and an accompanying letter from a State of Texas-certified medical doctor. The person with a disability is also required to meet the same criteria for certification as M/WB E and SB E applicants. Only seven PDOB E s domiciled in Harris County were identified in the City's PDOB E certification list. There were too few PDOB E s to perform a meaningful analysis of PDOB E utilization.

B. Strategies to Maximize the Participation on METRO Contracts

1. Sheltered Market Program for Veteran-owned Business Enterprises and Persons with Disability-owned Business Enterprises

METRO should implement a Sheltered Market Program limited to VOB E s and PDOB E s on small purchases valued at \$50,000 and under. The types of work the certified VOB E s and PDOB E s perform should be identified and the contracts included in the sheltered market should reflect their offerings. The sheltered market opportunities should be reviewed annually to ensure they mirror the capabilities of the certified VOB E s.

The SB E Program Office should classify VOB E s and PDOB E s in the sheltered market database by NAICS code. The SB E Program Office and the Procurement Department should coordinate their efforts to identify prime contracts that align with the construction, professional services, and goods and services offered by the certified VOB E s and PDOB E s. Relevant contracts for



construction, professional services, and goods and services should be evaluated for inclusion in the Sheltered Market Program annually. Minimally, consideration will be given to the following factors:

- i. Estimated value of \$50,000 or less.
- ii. Scope of work is limited to a single trade of service.
- iii. Specialty projects include, but are not limited, to the following listed in Table 9.18:

Table 11.18: Sheltered Market Specialty Projects

Construction	Professional Services	Goods and Services
Asbestos removal	Transit stops continuing design-build services	Supplies
Landscaping	Transit stops operation maintenance	Materials
Carpentry	Passenger or marketing surveys	Small appliance purchases
Chip sealing	Accounting	Pest control
Curb cuts	Staffing	Lawn
Elevator repair	Environmental studies	Mowing and tree cutting
Site surveying	General program management and engineering consultant	Towing
Plumbing	Corporate communication and marketing	Printing
Guard rails	Informal IT repair projects	
Roofing	Design work	One-time service or video or photography
Site preparation and cleaning	Cultural resource studies	
Painting		Power Tools
Masonry		
Pipe fitting		
Small demolition		

- a. If a bid is not secured from a solicited VOB or PDOB, the procurement shall be opened to the public.
- b. The SBE Program Office shall execute the following pre-award responsibilities:
 - i. Utilize the VOB Directory and the City of Houston's PDOB Certification Directory to ensure VOBs and PDObS are solicited for contracts in the Sheltered Market Program.
 - ii. Post a description of the Sheltered Market Program on the SBE Program's webpage and in METRO marketing and promotional materials.
 - iii. Expand routine staff training to ensure that METRO department managers are informed about the program and its requirements.



- iv. Advertise contracting opportunities in veteran-focused and general circulation media and trade publications.
- v. Email certified VOBs and PDOBs of upcoming informal contracting opportunities.

Veteran-owned Business Enterprises should be defined as:

- A person who served in the active military, naval, or air service, and who was discharged or released under conditions other than dishonorable, including military, naval, or air service.
- 51% owned and controlled by a veteran.
- 51% management controlled by a veteran.
- Licensed to operate in Harris County.

Persons with Disabilities Business Enterprises should be defined in accordance with the Houston Office of Business Opportunity:

- The eligibility requirements set forth by the City of Houston’s disabled persons-owned businesses certification should be the accepted standard. METRO should accept PDOBE certification from the following agencies:
 - Veteran and Service-Disabled Veteran-Owned Small Business Enterprises, Coupa Suppliers, Texas Directory
 - Persons with Disabilities Business Enterprises, City of Houston

2. Outreach Strategies Targeting Persons with Disability-owned Business Enterprises

METRO should launch a targeted PDOBE outreach campaign in partnership with the City of Houston to encourage eligible businesses in Harris County to certify with the City of Houston as persons with disabilities business enterprises. The following outreach tactics should be implemented as a 12-month outreach campaign.

a. Develop Tag Line and Message

The tag line, “Contracting with persons with disabilities business enterprises through the Sheltered Market Program” should be considered to convey the message of METRO’s commitment to contracting with PDOBs. The message should be a call-to-action notice that solicits inquiries for construction, professional services, and goods and services small purchases. The tagline and logo should be incorporated into all M/WBE and SBE outreach materials to create an identity for METRO’s PDOBE outreach campaign. The tagline and logo should also be used on all digital and paper marketing materials. A display banner should also be used at outreach events promoting METRO’s Sheltered Market Program.



Frequency: One time

b. Revamp Procurement Documents

Procurement materials should be revised to include the PDOBE Sheltered Market Program's standards and application requirements for uniformity throughout all departments. The materials should include requests for bids, proposals, qualifications, and pre-bid and proposal conference invitation letters.

Frequency: One time for each of the materials

c. Design Promotional Materials

Promotional materials and particularly digital copies, such as brochures and handouts, should be designed with METRO's tag line and message promoting the PDOBE Sheltered Market Program and distributed at events and posted on METRO's website.

Frequency: Annually



d. Launch an Outdoor Advertising Campaign

METRO's advertising portals should be utilized as strategic platforms to convey the message to the public of METRO's commitment to provide construction, professional services, and goods and services opportunities to PDOBEs through the Sheltered Market Program. Thereby generating favorable public relations while indirectly reaching the target market segments.

Frequency: Ongoing (nominal cost utilizing METRO portals)

e. Enhance Internet Presence

METRO's website was evaluated with the goal of promoting the PDOBE Sheltered Market Program and the proposed website refinements include:

- Create a "VOBE and PDOBE Sheltered Market Program" link under the "Business with METRO" link on the Main Page

A link for the VOB and PDOBE Sheltered Market Program should be created to improve awareness of the newly created program. The link should be listed under the "Business with METRO" link located on the Main Page of METRO's website. After the user clicks on the "VOBE and PDOBE Sheltered Market Program" link, the page should serve as a central hub to provide users with information on the program's objectives, eligibility requirements, application process and forms, and upcoming contracting opportunities.

- Create an FAQ Page

An FAQ link should be included in the VOB and PDOBE Sheltered Market Program to provide users answers to general questions regarding the program. The FAQ page should also include a table of contents to allow users to determine immediately if their question is listed and answered. In addition, bolding the questions will allow visually impaired users to more quickly discern information when scrolling down the page.

- List All Certified Vendors on the Website

All certified VOB and PDOBE vendors should be listed on the "Sheltered Market Program Page." By making it known that the certified vendor list is only available for registered VOB and PDOBE users, more businesses may seek registration. A searchable database in which the prime contractors and various department officials can narrow down the vendor search, with keywords such as business name, industry, location of the business, and ethnicity of the business owner, should be developed to ensure information on certified vendors is made accessible. The directory for all vendors, including certified contractors, consultants, truckers, and suppliers, should be available on the website in both PDF and Excel formats.



- Increase Outreach Efforts

Outreach should be evident and detailed on METRO’s “VOBE and PDOBE Sheltered Market Program” main page. Outreach efforts can include publishing compliance reports, newsletters, or postings of events that METRO supports or hosts regarding the Sheltered Market Program.

- Utilize Low-Cost/No-Cost Digital Media

As a medium to deliver focused messaging with high frequency to the market segments, targeted messages should be transmitted using email and facsimile blasts, online social networks (i.e., Facebook, Twitter), and blogs in a culturally sensitive and linguistically specific manner.

Frequency: Ongoing (nominal cost)

f. Media Notice

Press packets should be sent to local newspapers, radio, and television stations; the Hispanic, Asian, African American, and women chambers and the Houston-based metropolitan chambers of commerce. Local government officials should receive a press packet. A series of articles should be pitched to veteran and disabled persons publications and community newsletters. Public service announcements should be distributed to selected radio stations to be aired as part of their community affairs programming.

Direct electronic mail should be distributed to all target segments to announce the program launch. The brochure and current contracting information should be distributed over six weeks to inform the business community and focus its attention on the launch.

Frequency: Twelve-week campaign (nominal cost)

g. METRO Open House

A METRO Open House event should occur after an intense media blitz. The METRO Board of Commissioners, department heads, and key staff should attend, as well as other local government officials and corporate executives. Harris County-based veteran and disabled persons-owned business professional organizations should be asked to co-sponsor the event, and local agencies and businesses should be invited to exhibit their goods and services. Co-sponsors should be asked to invite their members by distributing the invitation using their communication channels. Invitations should also be sent to veteran and disabled person-owned businesses.

The event’s agenda should include a presentation by each department manager describing upcoming construction, professional services, and goods and services contracts that meet the VOB and PDB Sheltered Market Program’s threshold requirements and bid requirements. In addition, there should be a discussion of the program’s eligibility process.



Educational seminars on bonding and small business loan programs and products should be offered for open house attendees. As another value-added benefit, METRO could advertise and award informal contracts at the event. Other local agencies and corporations could also be invited to exhibit and award informal contracts. These features of the open house would provide relevant technical assistance and the potential for an actual contract that vendors should consider beneficial.

Frequency: Annually (nominal cost using co-sponsors)

h. Partner with Local Agencies

Local agencies should be encouraged to disseminate information about METRO's VOB and PDOB Sheltered Market Program's procurement opportunities at their open houses, events, newsletters, e-bulletins, and as a hyperlink on their websites. A partnership with the City of Houston would be especially useful to encourage eligible businesses to certify with the City through their disabled persons-owned business enterprise certification.

Frequency: Ongoing (nominal cost)

i. Conduct Annual METRO Evaluation

Telephone and e-mail surveys and the bidding history recorded in METRO's database should be used to assess the effectiveness of the outreach campaign to VOBs and PDOBs. The telephone and e-mail surveys should be distributed randomly to a sample of vendors in METRO's database. The surveys should gather information about awareness levels of the new procurement process, campaign tactics, satisfaction levels, knowledge of contracting opportunities, number of bids, proposals or quotations received, and contracts awarded. A query of METRO's database should measure the number of bids, proposals, and quotations received from each of the target market segments. The number of new target market businesses in the vendor database may be another measure of the campaign's effectiveness.

Frequency: Annually (nominal cost)

j. Outreach Plan Overview

A summary of the tactics to implement the outreach plan, including the frequency and cost range, are provided below in Table 11.19.



Table 11.19: Outreach Plan Summary

OUTREACH TACTICS	FREQUENCY	COST
Develop tag line and message	One time	Medium
Revise procurement documents	One time	Medium
Design promotional materials	Annually	Medium
Devise outdoor advertising campaign	Ongoing	Nominal using METRO portals
Enhance internet presence	One time with ongoing content updates	Nominal using METRO staff
Utilize low-cost/no-cost digital media	Ongoing	Nominal
Launch outreach campaign	12-week campaign	Nominal
Promote PDOBE certification	Ongoing	Nominal
Participate in business education opportunities	Ongoing	Nominal
Partner with local agencies	Ongoing	Nominal
Conduct annual METRO evaluation	Annually	Nominal

VIII. Website Enhancements to Improve Access to Disabled Persons-owned Business Enterprises

METRO's website (<https://www.ridemetro.org/Pages/index.aspx>) was reviewed to offer user friendly enhancements for disabled persons-owned business owners. The website review included webpages with information for users with disabilities who wish to access METRO services. The goal of the review was to assess the accessibility features of the website to offer suggestions to improve website accessibility for people with disabilities.

The first part of the website evaluation consisted of a review based on the guidelines set by the Americans with Disabilities Act (ADA) and the World Wide Web Consortium's (W3C) Web Access Initiative. The analysis included:

- Sampling video content for closed captions.
- Navigation testing without a mouse.
- Examining samples of HTML source code to determine ease of use for screen readers.

The second part of the website evaluation was completed by checking the web features, policies, and procedures against the ADA Toolkit checklist. Thus, the website recommendations will improve accessibility for the persons who are deaf or hard of hearing, have dexterity related disabilities, or have low vision or blindness.



1. METRO Website Assessment: ADA and W3C Analysis

METRO's website was found to be accessible in most areas. METRO's website improves the experience of web users with disabilities by effective use of closed-captioning, and site-wide language translation powered by Google Translate. Many language options for Title VI complaint forms were easily navigable without the use of a mouse.

In addition, METRO's website meets accessibility guidelines by providing drop-down menus in forms that do not default to an option requiring users to select for submission (except for "state," which defaults to "Texas"). It includes a Website Usage Disclaimer explaining how to change screen resolution on the Accessibility Guidelines page. Instructions on how to utilize JAWS and Windows-Eyes and linking to sites with guidance on using various METRO web apps are also available for people using screen readers.

While the website provides many useful accessibility features, there are some modifications which would enhance its functionality for users with disabilities. The following enhancements, organized by website features and accessibility policies and practices, are offered:

a. Website Feature Enhancements

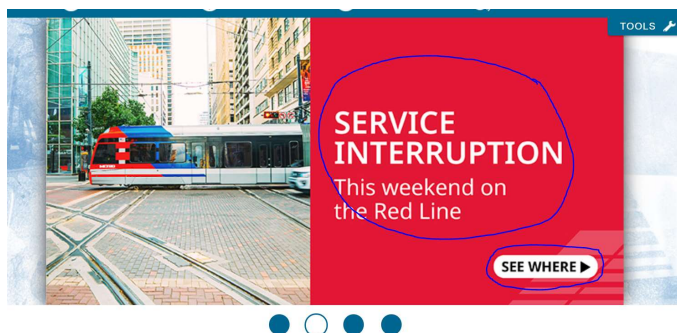
- Skip Navigation

A "skip navigation" link should be top of every webpage so that people using screen readers can bypass the row of navigation links at the top of the page and go directly to the webpage content. There is an invisible "skip to main content" button included at the top; however, users must tab through to render it visible.

- Links

All links should have a text description so that screen readers can alter the text. The four-rotating links beneath the navigation bar on the home page have text embedded in images, which means screen readers cannot alter them.

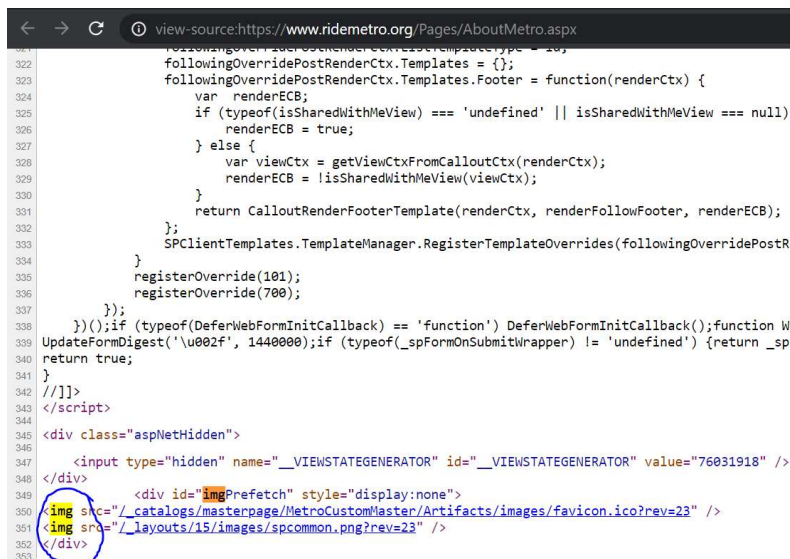
Figure 11.1: Website Link Example



- Images

All images (photos, maps, graphics, etc.), should include HTML tags (such as an “alt” tag or a “longdesc” tag) with text equivalents of the material being visually conveyed.²⁹⁴ An example of an area where HTML tags for screen readers could be placed is illustrated in Figure 11. 2.

Figure 11.2: METRO’s Website HTML Code



- Alternative Document Formats

All documents available for download on the website could provide text-based alternatives. For example, on the 2019 Election Materials page (<https://www.ridemetro.org/Pages/2019-Election-Materials.aspx>), accessibility could be improved by offering HTML and Rich Text Format versions of the PDFs. Further examples include the Ridership Reports and Title VI complaint forms, which are not offered in HTML nor Rich Text format and are not fillable online.

- Web Forms

Many screen readers switch to “forms mode” when engaging with content in a form element on a website. METRO’s web forms can be made more accessible to screen readers by putting certain elements into the <form> portion of the HTML code so the text can be read aloud. Screen readers can only read aloud for HTML elements such as: <input>, <select>, <textarea>, <label>, and <legend>.²⁹⁵ In addition, all form controls should be labeled in the HTML code in ways that are explicit and clear. For example, see the METRO Lift Service Form for people with disabilities:



²⁹⁴ Example HTML code of accessible image description: <https://www.w3.org/TR/WCAG20-TECHS/H45.html>

²⁹⁵ Example code for accessible web forms that can be read aloud: <https://www.w3.org/WAI/tutorials/forms/instructions/>

Figure 11.3: METRO Lift Service Form

Application for METROLift Service Form

METROLift, complimentary paratransit service offered by METRO in accordance with the Americans with Disabilities Act (ADA), is a curb-to-curb, shared-ride transportation service for individuals with disabilities who cannot independently travel on METRO's fixed route bus or rail services. Eligibility is based upon an individual's physical and/or cognitive ability, not age, medical diagnosis, or income. As part of the eligibility process, customers will be asked to participate in an in-person interview. Eligibility determinations will be mailed within 21 days after the interview. If you need more information about METROLift services, please call our Customer Service and Eligibility department between 10 a.m. and 5 p.m., Monday through Friday at (713) 225-0119 or visit [METRO's website](#). To be considered for METROLift service, please complete the four steps described below.

Website Usage Disclaimer

For optimal results, we recommend you view this website with the most current Web browsers.

Step 1 of 4: Submit Physician or Health Care Professional's Certification Form

To apply for METROLift service, submit a Physician or Health Care Professional's Certification Form completed and certified by a physician/qualified health professional who is familiar with your disability. Download the form by clicking on the link below. You can attach the completed form below or mail the form METROLift, P.O. Box 61429, Houston, TX 77266-1429.

[Physician or Health Care Professional's Certification Form](#)

Upload Certification Form

[Choose File](#) | No file chosen

Step 2 of 4: Complete the Applicant Information Form

* Indicates a required field

Have you ever applied for METROLift?

☐ Yes ☐ No

Last name: First name: Middle initial:

Date of birth: mm/dd/yyyy ☐ Social Security Number (Last 4 digits only): XXX-XX-

```
view-source:https://www.ridemetro.org/Pages/MLApplicationForm.aspx
<form method="post" action="/MLApplicationForm.aspx" onsubmit="javascript:return WebForm_OnSubmit();" id="aspnetForm">
<div class="aspMethHidden">
<input type="hidden" name="__upcmwpid" id="__upcmwpid" value="" />
<input type="hidden" name="__upcmval" id="__upcmval" value="" />
<input type="hidden" name="MSOWebPartPage_PostbackSource" id="MSOWebPartPage_PostbackSource" value="" />
<input type="hidden" name="MSOTIPn_Selectedwpid" id="MSOTIPn_Selectedwpid" value="" />
<input type="hidden" name="MSOTIPn_View" id="MSOTIPn_View" value="0" />
<input type="hidden" name="MSOTIPn_ShowSettings" id="MSOTIPn_ShowSettings" value="False" />
<input type="hidden" name="MSOGallery_SelectedLibrary" id="MSOGallery_SelectedLibrary" value="" />
<input type="hidden" name="MSOGallery_FilterString" id="MSOGallery_FilterString" value="" />
<input type="hidden" name="MSOTIPn_Button" id="MSOTIPn_Button" value="none" />
<input type="hidden" name="__EVENTTARGET" id="__EVENTTARGET" value="" />
<input type="hidden" name="__EVENTARGUMENT" id="__EVENTARGUMENT" value="" />
<input type="hidden" name="__REQUESTDIGEST" id="__REQUESTDIGEST" value="noDigest" />
<input type="hidden" name="MSOSPWebPartManager_DisplayModelName" id="MSOSPWebPartManager_DisplayModelName" value="Browse" />
<input type="hidden" name="MSOSPWebPartManager_ExitDesignMode" id="MSOSPWebPartManager_ExitDesignMode" value="false" />
<input type="hidden" name="MSOWebPartPage_Shared" id="MSOWebPartPage_Shared" value="" />
<input type="hidden" name="MSOLayout_LayoutChanges" id="MSOLayout_LayoutChanges" value="" />
<input type="hidden" name="MSOLayout_InDesignMode" id="MSOLayout_InDesignMode" value="" />
<input type="hidden" name="__wpSelected" id="__wpSelected" value="" />
<input type="hidden" name="__wzSelected" id="__wzSelected" value="" />
<input type="hidden" name="MSOSPWebPartManager_OldDisplayModelName" id="MSOSPWebPartManager_OldDisplayModelName" value="Browse" />
<input type="hidden" name="MSOSPWebPartManager_StartWebPartEditingName" id="MSOSPWebPartManager_StartWebPartEditingName" value="fa" />
<input type="hidden" name="MSOSPWebPartManager_EndWebPartEditing" id="MSOSPWebPartManager_EndWebPartEditing" value="false" />
<input type="hidden" name="__VIEWSTATE" id="__VIEWSTATE" value="/wEPDwUBMwA9Kfg7MDQwAgIBDQwBgIBDQwBIAU2QwAmYpZBYCAgEPfGfE1ByZK" />
</div>
```

Accessibility could be improved by adding descriptions and tags for each of the form's input elements to improve readability and clarity for users of screen readers. W3C provides examples of accessibly labeled web forms in HTML.²⁹⁶

- Check Boxes

Check boxes in forms should be selectable without the use of a mouse.

- Drop-down Menus

Drop-down menus in forms could be made more accessible by making the default option contain a description of information being requested.

- Tables

Webpages with tables should describe the table in the HTML code and should associate all data cells with column and row identifiers. For example, the HTML code for the Ridership Tables for 2019 provides a general overview of the table's content in HTML.

Figure 11.4: Ridership HTML Code

```
view-source:https://www.ridemetro.org/Pages/RidershipReport-082019.aspx
1452 <input style="display:none" id="__spPickerReturnValueHolder" type="text" value="0" />
1453 <div class="ms-clear"></div></div>
1454 </div>
1455 </div></div><div id="vid_e14e79af-b429-4d41-9b44-4c0bc86fdf4d" unselectable="on" style="display:none;
1456 <em>The above table serves as a snapshot of the typical factors that impact ridership, and illustrate:
1457 <a href="#top">Back to top of&#160;page</a></p>
```

METRO's website could be made more accessible by including descriptions for all tables. The tables on METRO's website could also be made more accessible to people using screen readers

²⁹⁶ Example code for accessibly labeled web forms: <https://www.w3.org/WAI/tutorials/forms/labels/>.



by including more granular comments in the HTML code that describe column and row identifiers for every table header. In addition to providing more granular comments, the HTML code of the tables could utilize <col> and <row> in the <scope> attribute and use <th> tags (to mark header cells) and <td> tags (to mark data cells) so that screen readers can easily interpret table contents.

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In addition, many tables on METRO's website (including on the Ridership page) are embedded as PDFs, so they do not appear in the HTML source code in a way that screen readers can access. PDF documents for maps and tables should be offered in alternative accessible formats, such as HTML or RTF.

- Videos

While METRO's website does an excellent job providing closed captioning for videos, video accessibility could be improved by including audio descriptions of the images presented in the videos so that people who are blind or have low vision can determine what is being shown on screen.

2. Website Accessibility Policy and Procedure Enhancements

To improve web accessibility, METRO should have the following practices, documents, and policies available on the METRO website. While some of these may exist internally, having the information available on the METRO website would improve accessibility for people with disabilities.

- Written policy for web accessibility- METRO's website contains a page on accessibility guidelines, but there are no guidelines beyond how to change browser settings.
- Accessibility policies posted on METRO's website should be specific and easily located. More detailed policies on the Accessibility Guidelines page would be helpful for users who need other accommodations beyond browser setting adjustments.

METRO should describe accessibility standards it adheres to in greater detail. The Accessibility Guidelines follows WCAG standards with respect to its app. However, METRO could describe the standards used for accessibility to the entire website.

3. Website Monitoring and Quality Control

METRO should enact and list procedures for website monitoring and quality control. The procedures should be reviewed annually and minimally include:

- Training on web accessibility.
- Written commitment to maintaining accessibility that lists steps METRO will take to achieve accessibility goals.



²⁹⁷ Accessibly coding tables: <https://www.w3.org/WAI/tutorials/tables/>.

- Procedures to ensure that content is not added to the website until it has been made accessible.
- Standards for a routine check of the HTML on all new webpages to assess accessibility before the webpages are posted.
- Alternative formats to PDF documents including HTML or RTF.
- Dissemination to METRO staff and contractors the web accessibility policy and related procedures, and training on how to ensure web accessibility.





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