

Harris County Disparity Study 2020



HARRIS COUNTY DISPARITY STUDY

2020

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About the Study Team

Colette Holt & Associates (“CHA”) is a national law and consulting firm specializing in disparity studies, affirmative action contracting programs, expert witness services, compliance monitoring and strategic development related to supplier diversity initiatives. Founded in 1994, it is led by Colette Holt, J.D., a nationally recognized attorney and expert. In addition to Ms. Holt, the firm consists of Steven C. Pitts, Ph. D., who serves as the team’s economist and statistician; Ilene Grossman, B.S., CHA Project Administrator; Glenn Sullivan, B.S., CHA Director of Technology; Victoria Farrell, MBA, CHA Assistant Principal Researcher; and Joanne Lubart, J.D., Special Counsel. CHA is certified as a Disadvantaged Business Enterprise, Minority-Owned Business Enterprise and a Woman-Owned Business Enterprise by numerous agencies.

Sylvia Cavazos Public Relations/Public Affairs, LLC (DBE) was established in 2002 to reach multi-cultural audiences and under-served communities through focused engagement and communications utilizing localization and grassroots outreach on a national, regional and local level.

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I. EXECUTIVE SUMMARY

A. Study Methodology and Data

Colette Holt & Associates (CHA) was retained by Harris County (“County”) to perform a disparity study of its County-funded contracts in conformance with strict constitutional scrutiny. We determined the County’s utilization of Minority- and Women-Owned Business Enterprises (collectively “M/WBEs”) during FY2016 through the first quarter of FY2019; the availability of these firms as a percentage of all firms in the County’s geographic and industry market areas; and any disparities between the County’s utilization of M/WBEs and M/WBE availability. We further analyzed disparities in the wider Houston economy, where affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We also gathered anecdotal and qualitative data about the experiences of M/WBEs in obtaining County contracts and associated contracts. Based on these findings, we evaluated whether the use of race-conscious measures is supported by the results of this analysis. We were also tasked with making recommendations for increasing the inclusion of M/WBEs and small businesses.

The methodology for this study embodies the constitutional principles of *City of Richmond v. J.A. Croson, Co.*, Fifth Circuit Court of Appeals case law, and best practices for designing race- and gender-conscious and small business contracting programs. The CHA approach has been specifically upheld by the federal courts. It is also the approach developed by Ms. Holt for the National Academy of Sciences that is now the recommended standard for designing legally defensible disparity studies.

B. Legal Standards¹

To be effective, enforceable, and legally defensible, a race-based program for public sector contracts, regardless of funding source, must meet the judicial test of constitutional “strict scrutiny”. Strict scrutiny is the highest level of judicial review. Strict scrutiny analysis is comprised of two prongs:

1. The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.

1. Please see Chapter II.

2. Any remedies adopted must be “narrowly tailored” to that discrimination; the program must be directed at the types and depth of discrimination identified.²

The compelling governmental interest prong has been met through two types of proof:

1. Statistical evidence of the underutilization of minority- or women-owned firms by the agency and/or throughout the agency’s geographic and industry market area compared to their availability in the market area. These are disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority- and women-owned firms in the market area and seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.³ Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

The narrow tailoring prong has been met by satisfying five factors to ensure that the remedy “fits” the evidence:

1. The necessity of relief;
2. The efficacy of race-neutral remedies at overcoming identified discrimination;
3. The flexibility and duration of the relief, including the availability of waiver provisions;
4. The relationship of numerical goals to the relevant market; and
5. The impact of the relief on the rights of third parties.

The case law on the Disadvantaged Business Enterprise (“DBE”) program for U.S. Department of Transportation-assisted contracts⁴ should guide the County’s program for County-funded contracts. Whether the program is called an M/WBE program or a DBE program or any other moniker, the strict scrutiny test applies. 49 C.F.R. Part 26 has been upheld by every court, and local programs for M/WBEs will be judged against this legal framework. We note that programs for veterans, persons with disabilities, preferences based on geographic location or truly race- and gender-neutral small business efforts are not subject to strict scrutiny and no evidence comparable to the type of proof required in a disparity study is needed to enact such initiatives.

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

3. *Id.* at 509.

4. 49 C.F.R. Part 26.

It is well established that disparities between an agency's utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for the consideration of race- or gender-conscious remedies. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to their success will meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems. Specific evidence of discrimination or its absence may be direct or circumstantial and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.

C. Utilization, Availability and Disparity Analyses⁵

CHA analyzed contract data for the years FY2016 through the first quarter of FY2019 for County-funded contracts. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the County's contract records (*e.g.*, industry type; zip codes; North American Industry Classification System ("NAICS") codes⁶ of prime contractors and subcontractors; non-certified subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File ("FCDF") for analysis contained 478 contracts, with a net paid amount of \$1,260,717,228; subcontractors received 1,433 contracts. Prime contractors received \$980,222,104 of the net paid amount; subcontractors received \$280,495,121 of the net paid amount.

The FCDF was used to determine the geographic and product markets for the analyses. It was also used to estimate the County's utilization of M/WBEs. We then used the FCDF, in combination with other databases (as described below), to calculate M/WBE unweighted and weighted availability in the County's marketplace by contract type.

We first determined the County's product market. The following Table 1-1 presents the NAICS codes, the label for each NAICS code, and the industry percentage distribution of spending across NAICS codes.

5. Please see Chapter III.

6. <https://www.census.gov/eos/www/naics>.

Table 1-1: Industry Percentage Distribution of Contracts by Dollars

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	42.3% ^a	42.3%
237110	Water and Sewer Line and Related Structures Construction	7.8%	50.1%
236220	Commercial and Institutional Building Construction	6.4%	56.5%
238210	Electrical Contractors and Other Wiring Installation Contractors	5.2%	61.7%
562111	Solid Waste Collection	4.8%	66.6%
238110	Poured Concrete Foundation and Structure Contractors	4.2%	70.8%
238910	Site Preparation Contractors	2.9%	73.7%
238990	All Other Specialty Trade Contractors	2.5%	76.3%
237990	Other Heavy and Civil Engineering Construction	2.4%	78.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	2.0%	80.7%
541330	Engineering Services	1.8%	82.5%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	1.6%	84.1%
541512	Computer Systems Design Services	1.0%	85.1%
TOTAL			100.0%^b

a. This very high share of County spending on NAICS code 237310 results from the inclusion of spending by the Harris County Toll Road Authority in the database.

b. The County's spending across an additional 181 NAICS codes comprised 14.9 percent of all spending. A chart of all of these NAICS codes is in Appendix D.

Source: CHA analysis of the County data.

To determine the relevant geographic market area, we applied the well accepted standard of identifying the firm locations that account for at least 75 percent of

contract and subcontract dollar payments in the contract data file.⁷ Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 97.2 percent of the contract dollars in this market. Table 1-2 lists how these dollars were distributed across counties in Texas.

Table 1-2: Distribution of Contracts in the County’s Product Market across Texas Counties

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Harris	82.7%	82.7%
Fort Bend	5.9%	88.6%
Montgomery	4.0%	92.6%
Brazoria	2.7%	95.2%
Galveston	1.1%	96.3%
Tarrant	1.0%	97.3%
Austin	0.7%	98.0%
Travis	0.6%	98.6%
Jefferson	0.3%	99.0%
Dallas	0.2%	99.2%
Bexar	0.2%	99.4%
Williamson	0.1%	99.5%
Collin	0.1%	99.6%
Burleson	0.1%	99.7%
Rockwall	0.1%	99.8%
Liberty	0.1%	99.9%
Hays	0.0%	99.9%
McLennan	0.0%	99.9%
Walker	0.0%	99.9%
Waller	0.0%	99.9%
Milam	0.0%	99.9%

7. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>, p. 49. (“National Disparity Study Guidelines”).

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Angelina	0.0%	100.0%
Polk	0.0%	100.0%
Erath	0.0%	100.0%
Nacogdoches	0.0%	100.0%
Henderson	0.0%	100.0%
Harrison	0.0%	100.0%
Denton	0.0%	100.0%
Marion	0.0%	100.0%
Deaf Smith	0.0%	100.0%
Brazos	0.0%	100.0%
Smith	0.0%	100.0%
Bell	0.0%	100.0%
TOTAL		100.0%

Source: CHA analysis of the County data.

Based on this analysis, Harris, Fort Bend, Montgomery, Brazoria, and Galveston Counties were determined as the counties comprising the County’s geographic market. These counties represent 96.3 percent of the County’s spending. With the County’s product and geographic market area determined (and, therefore, the agency’s *constrained* product market), the next step was to determine the dollar value of the County’s utilization of M/WBEs⁸ as measured by payments to prime firms and subcontractors and disaggregated by race and gender. The County did not collect data for all subcontractors, as well as other records critical for the study. We therefore had to obtain missing data from prime vendors, a lengthy process, and reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

Table 1-3 presents the distribution of contract dollars by all industry sectors. Chapter III provides detailed breakdowns of these results.

8. We use the term “M/WBEs” to include firms owned by racial or ethnic minorities and white females that are not certified as M/WBEs by an agency recognized by the Airport. This casts the “broad net” required by the courts, as discussed in Chapter II.

**Table 1-3: Distribution of the County’s Contract Dollars by Race and Gender
(share of total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
236220	1.3%	0.0%	0.0%	0.0%	0.0%	1.3%	98.7%	100.0%
237110	0.0%	4.3%	2.8%	0.0%	2.7%	9.9%	90.1%	100.0%
237130	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
237310	0.4%	4.4%	0.2%	0.0%	1.7%	6.8%	93.2%	100.0%
237990	0.0%	14.5%	0.0%	0.0%	8.2%	22.7%	77.3%	100.0%
238110	0.1%	1.2%	0.1%	0.0%	0.9%	2.3%	97.7%	100.0%
238120	0.8%	5.2%	11.5%	0.0%	17.7%	35.1%	64.9%	100.0%
238140	0.0%	0.0%	0.0%	0.0%	21.2%	21.2%	78.8%	100.0%
238150	0.0%	7.4%	0.0%	0.0%	0.0%	7.4%	92.6%	100.0%
238160	0.0%	0.1%	0.0%	0.0%	4.7%	4.8%	95.2%	100.0%
238210	0.0%	10.7%	0.1%	0.0%	11.4%	22.2%	77.8%	100.0%
238220	0.0%	0.0%	0.0%	0.0%	1.7%	1.7%	98.3%	100.0%
238290	0.0%	0.8%	0.0%	0.0%	36.4%	37.2%	62.8%	100.0%
238310	1.3%	0.1%	0.0%	0.0%	8.9%	10.3%	89.7%	100.0%
238350	0.0%	36.5%	0.0%	0.0%	0.4%	37.0%	63.0%	100.0%
238390	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%	98.5%	100.0%
238910	0.1%	1.4%	0.1%	0.0%	11.8%	13.4%	86.6%	100.0%
238990	0.0%	24.6%	0.0%	0.0%	10.4%	35.1%	64.9%	100.0%
327320	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	99.5%	100.0%
327390	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423430	2.2%	10.8%	21.7%	0.0%	24.4%	59.2%	40.8%	100.0%
484110	0.0%	32.2%	0.0%	47.7%	9.4%	89.3%	10.7%	100.0%
524114	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541330	6.3%	6.0%	8.8%	0.0%	0.1%	21.2%	78.8%	100.0%
541512	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561730	0.0%	1.2%	0.0%	0.6%	8.6%	10.3%	89.7%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
561990	2.3%	2.2%	0.6%	0.0%	6.1%	11.2%	88.8%	100.0%
562111	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	0.5%	4.6%	0.6%	0.1%	3.2%	9.1%	90.9%	100.0%

Source: CHA analysis of the County data.

Using the “custom census” approach with adjustments to estimating availability and the further assignment of race and gender using the Final Contract Data File (FCDF), the Master M/WBE Directory compiled by CHA and the Dun & Bradstreet/ Hoovers Database, we determined the aggregated availability of M/WBEs, weighted⁹ by the County’s spending in its geographic and industry markets, to be 28.4 percent. Table 1-4 presents the weighted availability data for all product sectors combined for the racial and gender categories.

Table 1-4: Aggregated Weighted Availability for the County Contracts

Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
8.4%	10.7%	3.0%	0.4%	5.9%	28.4%	71.6%	100.0%

Source: CHA analysis of the County data; Hoovers; CHA Master Directory.

As discussed in depth in Chapter I, strict constitutional scrutiny requires that a local government must establish that discrimination operates in its market area, through consideration of evidence of disparities, among other evidence. To examine the County’s compelling interest in remedying discrimination in its market area, we next calculated disparity ratios for total M/WBE utilization compared to the total weighted availability of M/WBEs, measured in dollars paid.

A “large” or “substantively significant” disparity is commonly defined by courts as utilization that is equal to or less than 80 percent of the availability measure. A substantively significant disparity supports the inference that the result may be caused by the disparate impacts of discrimination.¹⁰ A statistically significant disparity means that an outcome is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability

9. For purposes of overall, annual aspirational goal setting, the availability estimates should be weighted by the County’s actual spending patterns, as determined by the NAICS codes it utilized. Weighting availability results is a more accurate picture of what firms are available to participate in the agency’s opportunities. For example, high availability in a code in which minimal dollars are spent would give the impression that there are more M/WBEs that can perform work on agency contracts than are actually ready, willing and able. Conversely, a low availability in a high dollar scope would understate the potential dollars that could be spent with M/WBEs. This is why the USDOT “Tips for Goal Setting” urges recipients to weight their headcount of firms by dollars spent. See <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.]

that it resulted from random chance alone. A more in-depth discussion of statistical significance is provided in Appendix C.

A *disparity ratio* is the relationship between the utilization and weighted availability, determined above. Mathematically, this is represented by:

$$DR = U/WA$$

Where DR is the disparity ratio; U is utilization rate; and WA is the weighted availability

Table 1-5 presents the calculated disparity ratios for each demographic group.

Table 1-5: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	6.0%‡	43.0%‡*	19.8%‡	22.8%‡	54.1%‡	32.0%‡***	126.8%***

Source: CHA analysis of the County data.

‡ Indicates substantive significance

***Indicates statistical significance at the 0.001 level¹¹

D. Analysis of Economy-Wide Race and Gender Disparities in the County’s Market¹²

We also explored the Census Bureau data and literature relevant to how discrimination in the County’s industry market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in the County’s prime contract and subcontract opportunities. This sheds light on how M/WBEs fare in the absence of remedial intervention through goals programs.

We analyzed the following data and literature:

Data from the Census Bureau’s *Survey of Business Owners* indicate very large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms.

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10. See U.S. Equal Opportunity Employment Commission regulation, 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”).
 11. Appendix C discusses the meaning and role of statistical significance.
 12. Please see Chapter IV.

Data from the Census Bureau's *American Community Survey* ("ACS") indicate that Blacks, Hispanics and White women were underutilized relative to White men. Controlling for other factors relevant to business outcomes, wages and business earnings were lower for these groups compared to White men. Data from the ACS further indicate that non-Whites and White women are less likely to form businesses compared to similarly situated White men.

The literature on barriers to access to commercial credit and the development of human capital further reports that minorities continue to face constraints on their entrepreneurial success based on race. These constraints negatively impact the ability of firms to form, to grow, and to succeed.

All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in overall marketplace discrimination without some type of affirmative intervention. Taken together with anecdotal data, this is the type of proof that addresses whether, in the absence of M/WBE contract goals, the County will be a passive participant in the discriminatory systems found throughout its industry market. These economy-wide analyses are relevant and probative to whether the County may employ narrowly tailored race- and gender-conscious measures to ensure equal opportunities to access its contracts and associated subcontracts.

E. Qualitative Evidence of Race and Gender Barriers in the Houston Overall Market¹³

In addition to quantitative data, the courts look to anecdotal evidence of firms' marketplace experiences to evaluate whether the effects of current or past discrimination continue to impede opportunities for M/WBEs, such that race-conscious measures are necessary to ensure a level playing field for all firms. To explore this type of anecdotal evidence of possible discrimination against minorities and women in Harris County's geographic and industry markets and the effectiveness of its current race- and gender-neutral procurement policies, we conducted a public webinar, and small group business owner and stakeholder interviews in person and by telephone. Ninety-nine individuals participated. The following are brief summaries of the views expressed over the many sessions by numerous participants.

Marketplace Experiences:

- Many minority and women business owners reported that they continue to encounter discriminatory attitudes, stereotypes and negative perceptions of their qualifications, professionalism and capabilities. The assumption is that

13. Please see Chapter V.

M/WBEs are less qualified, and their work is worth less. While sometimes subtle, these biases impact their attempts to obtain County and private sector contracts.

- Several M/WBEs reported that prime vendors undervalue their capabilities and work products and put unfair pressure on small firms to lower prices to the prime's advantage.
- These types of barriers led minorities and women to almost unanimous agreement that M/WBE goals will be necessary to level the playing field and equalize opportunities on County prime contracts and subcontracts.
- Minority and women owners were clear that they seek a level playing field, not an unfair advantage.
- Prime contracts were reported to be especially difficult to achieve.
- The inability to fairly access capital was a barrier to many firms.
- Most firms that have participated in government contracting affirmative action programs found them to be beneficial. Some M/WBEs have been able to parlay these programs as a platform to seek private sector work.
- Many participants described entrenched relationships at Harris County as major impediments to obtaining County work.
- Contract size was another major barrier to M/WBEs performing work for the County, especially as prime vendors. Experience requirements were often another obstacle to M/WBEs and other small firms serving as County prime vendors.

M/WBE Recommendations for New Initiatives:

- Many M/WBEs had recommendations for how the County should administer a race- and gender-based program. There was broad agreement that the new program must include rigorous monitoring to ensure that prime vendors keep their M/WBE contractual commitments.
- Bids and proposals promising M/WBE participation must be closely evaluated to ensure that the proposed subcontractor is performing a commercially useful function.
- The documentation of prime vendors that are unable to meet contract goals, and therefore submit evidence of their good faith efforts to do so, must also be carefully scrutinized.
- The County should conduct more outreach to M/WBEs and small local firms, with a focus on particular industries and types of projects.

- Several M/WBEs suggested the County adopt a mentor-protégé program. Larger, majority-owned firm representatives also supported some type of mentor-protégé initiative.

Doing Business with Harris County:

- Firms that have done business with Harris County almost universally reported good experiences. Several stated the County was their favorite agency client.
- Relationships are crucial, however.
- Several participants requested the County provide training about how to access County contracting opportunities and meet compliance requirements.
- Many prime contractors had advice for Harris County about adopting a race- and gender-conscious program. While not opposed to a new initiative, they cautioned against modeling the program after the City of Houston’s M/W/SBE program. Long lead times to become City-certified were a particular concern.
- There were also concerns that there might not be a sufficient number of qualified M/WBEs to meet new County contract goals. Some general contractors asserted that they use M/WBEs regardless of whether there is a goal.
- Goals imposed by other Houston-area agencies sometimes negatively affect non-M/WBE subcontractors and subconsultants.

Consistent with quantitative evidence reported in this study, anecdotal interview information suggests that minorities and women continue to suffer discriminatory barriers to full and fair access to Harris County, and private sector, contracts and subcontracts. While not definitive proof that the County should apply race- and gender-conscious measures to reduce these impediments, M/WBEs’ experiences are the type of evidence that, especially when considered alongside the study’s statistical evidence, the courts have found to be probative of whether the County may use narrowly tailored M/WBE contract goals to address discriminatory barriers. This element of the “strong basis in evidence” necessary for race-conscious relief also provides guidance about what types of narrowly tailored remedies will level the playing field for County-funded opportunities.

F. Recommendations¹⁴

The quantitative and qualitative data presented in this study provide a thorough examination of whether M/WBEs operating in Harris County’s geographic and pro-

14. Please see Chapter VI.

curement markets have full and fair opportunities to compete for its prime contracts and associated subcontracts. The study results support the County's compelling interest in implementing a race- and gender-conscious contracting program. The record— both quantitative and qualitative— establishes that M/WBEs in the County's market area continue to experience significant disparities in their access to County contracts and private sector opportunities and to the resources necessary for business success. These results provide a sufficient basis for the use of narrowly tailored remedial race- and gender-based measures to ensure equal opportunities for all firms to do business with Harris County.

As a general matter, Harris County should model its program on the elements of the Disadvantaged Business Enterprise (“DBE”) Program for federally-assisted transportation contracts.¹⁵ Courts have pointed to an agency's reliance on Part 26 as a guide as evidence that the local agency's program is constitutionally narrowly tailored and employs best practices.

Based on this case law and national best practices for M/WBE programs, we recommend the following elements of a narrowly tailored M/WBE program:

1. Implement Race- and Gender-Neutral Measures

This is a critical element of narrowly tailoring the program, so that the burden on non-M/WBEs is no more than necessary to achieve the County's remedial purposes and the program meets the *Croson* test for flexibility. Increased participation by M/WBEs through race-neutral measures will also reduce the need to set M/WBE contract goals. The following enhancements of the County's current efforts, based on the business owner interviews, the input from senior County management, and national best standards for M/WBE programs, will help to meet these standards.

Fully Implement an Electronic Contracting Data Collection, Monitoring and Notification System: A fully functional system is the most critical first step that Harris County can take. As is very common, the County did not have the information needed for the inclusion of subcontractor payments in the analysis. There was no centralized database to track prime contract data, and the County did not track subcontractor data. All required information had to be created manually. Further, the County could not provide verified data on what it had paid to prime contractors. In addition to hindering research, the lack of a system will also make it very difficult to monitor, enforce and review any new initiatives. As part of its existing electronic data collection system, the County should immediately implement the following functionality:

- Full contact information for all firms.

15. 49 C.F.R. Part 26

- Contract/project-specific goal setting using the study data.
- Utilization plan capture for prime contractor submission of subcontractor utilization plans.
- Contract compliance for certified and non-certified prime contract and subcontract payments for all formally procured contracts for all tiers of all subcontractors, both M/WBEs and non-M/WBEs.
- Program report generation that provides data on utilization by industries, race, gender, dollar amount, procurement method, etc.
- An integrated email notification and reminder engine to inform users of required actions, including reporting mandates and dates.
- Outreach tools for eBlasts and related communications, and event management for tracking registration and attendance.
- Access by authorized County staff, prime contractors and subcontractors.

Create an Office of Economic Opportunity and Equity Department: The Office should oversee all efforts towards contracting diversity and inclusion. The Office should report directly to the County Judge and should have the same level of authority as other County Departments to provide the bureaucratic stature necessary to move new initiatives forward. This Office should be a facilitation function, not a direct user department, so its mission must be integrated into all County departments. To succeed, the program must be viewed as the responsibility of everyone, not just the Office. Staff should be responsible for M/WBE program elements of the contract award process (outreach, goal setting, bid and proposal review for compliance, etc.) and the contract performance process (goal attainment, substitution reviews, prompt payment tracking, etc.). The Office should work closely with the Office of the Purchasing Agent to continue current activities to encourage participation by M/WBEs in formal and informal procurement processes. Cooperation and coordination with other departments will also be essential to the program's success.

Increase Vendor Communication and Outreach to M/WBEs and Small Firms: The new Office should conduct more regularly scheduled vendor outreach events to provide information and address questions regarding upcoming opportunities. These events should include general fairs as well as meetings targeted towards specific industries or communities, e.g., engineering projects. Outreach should facilitate "match making" between prime and subcontractors and include an annual contracting forecast of larger contracts that will permit vendors to plan their work and form teams. Special outreach for larger projects should be conducted to firms in those industry codes where M/WBEs are receiving few opportunities. These efforts should be in addition to the County's current efforts.

To address training for potential vendors, the County could hold in-person sessions and create training videos that provide information on all aspects of County contracting, in addition to written materials now on the website,

Focus on Reducing Barriers to M/WBE Prime Contract Awards: Given the size of the County's budget, there are numerous opportunities for smaller firms to perform as prime vendors. Several steps should be implemented:

- Develop contract specifications with an eye towards unbundling projects into less complex scopes and lower dollar values. This will permit small firms to perform in general and will also reduce the barriers of surety bonding and financing the jobs. Examples include maintenance and landscaping contracts, commodities purchases, professional services contracts such as information technology consulting and hardware.
- Review experience requirements with the goal of reducing them to the lowest level necessary to ensure the bidder has adequate experience, perhaps by recognizing similar though not identical types of work, including work performed for other governments and private sector clients.
- Review surety bonding and insurance requirements so they are no greater than necessary to protect Harris County's interests. Steps might include reducing or eliminating insurance requirements on smaller contracts and removing the cost of the surety bonds from the calculation of the lowest apparent bidder on appropriate solicitations.

Consider Partnering with Other Agencies and Local Organizations to Provide Bonding, Financing and Technical Assistance Programs: Partnering with supportive services programs offered by other agencies and organizations will allow the County to leverage their expertise, knowledge and experience in assisting these types of businesses. Bonding and financing programs assist small firms by providing loans and issuing surety bonds to certified contractors, with low interest rates. Programs could also provide general banking services on favorable terms to applicant firms. In addition, technical assistance with critical business skills such as estimating, accounting, safety, marketing, legal compliance, etc., could be made available in conjunction with existing efforts of Harris County organizations such as chambers of commerce, professional associations, community-based organizations, etc. Several people lauded Houston Community College as a possible partner.

2. Adopt a Minority- and Women-Owned Business Enterprise Program

The study's results support the determination that the County has a strong basis in evidence to implement a race- and gender-conscious M/WBE Program. The record— both quantitative and qualitative— establishes that M/WBEs in the County's market area experience significant disparities in their access to contracts without M/WBE goals, private sector opportunities and to resources necessary for business success. This Report presents the type of "passive participation" evidence that the courts have recognized that supports race- and gender-conscious programs. We therefore recommend the adoption of a new Program with the following major elements.

Adopt Goals for a New M/WBE Program: The County should set an annual, overall target for M/WBE utilization in County contracts (prime contracts and subcontracts combined). The availability estimates in Chapter III should be the basis for consideration of overall, annual spending targets for County funds. We found the weighted availability of M/WBEs to be 28.4 percent. This can be the County's goal (or a figure rounded to a whole number) for its overall spending with certified firms across all industry categories.

Set Contract Goals: In addition to setting an overall, annual target, Harris County should use the study's detailed unweighted availability estimates as the starting point for contract specific goals. As discussed in Chapter II of the study, the County's constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project. The detailed availability estimates in the study can serve as the starting point for contract goal setting.

Establish Program Eligibility: We recommend that all racial and ethnic groups and White women be eligible for participation in the program on a presumptive basis. The study found that, as a group, M/WBEs continue to suffer disparities in their access to County contracts. Program eligibility should be limited to firms that have a business presence in the County's market area, as established by this study, or that can demonstrate their attempts to do business within the County's market area.

The County's new program should accept M/W/DBE certifications from the Texas Unified Certification Program, the State of Texas' HUB program, and the City of Houston. It will be the County's constitutional responsibility, to ensure that the certifications it accepts are from narrowly tailored programs with demonstrated integrity.

Adopt Compliance and Monitoring Policies and Procedures: In addition to ensuring that the new M/WBE program sets narrowly tailored goals and eligibility requirements, it is essential that the County adopt contract award and performance standards for program compliance and monitoring that are like-

wise narrowly tailored and embody best practices. These should include clearly delineated policies and forms by which a bidder or proposer can establish that it has either met the contract goal(s) or made good faith efforts to do so; rules for how participation by certified firms will be counted towards the goal(s), e.g., a firm must perform a “commercially useful function” in order to be counted for goal attainment; and contract monitoring policies, procedures and data collection processes that include tracking the utilization of certified and non-certified subcontractors at all tiers of performance and monitoring prompt payment obligations of prime contractors to subcontractors; criteria and processes for how non-performing, certified firms can be substituted during performance; contract closeout procedures and standards for sanctions for firms that fail to meet their contractual requirements under the program; and a process to appeal adverse determinations under the program that meets due process standards.

Implement a Pilot Mentor-Protégé Program: We suggest modeling a mentor-protégé program after the successful programs approved by the U.S. Department of Transportation¹⁶, that provides support for M/WBEs while incentivizing the mentor to provide the types of assistance targeted to the protégé that will produce identified and achievable goals. We recognize that this level of direction and oversight will require resources. Close monitoring of the program will also be critical.

Provide Training for County Staff with Contracting or Vendor Interface Responsibilities: These significant changes will require a County-wide roll out of the new program, including of all Harris County personnel with contracting responsibilities and vendor management. In addition to providing technical information on compliance, it is also an opportunity to reaffirm the County’s commitment to supplier diversity and encourage all departments to buy into these values and objectives.

Provide Training for Vendors on the New Program: This could consist of in-person sessions, as well as web-based seminars that would answer questions such as who is eligible; how to become certified; how to meet goals or establish good faith efforts to do so; how to use the B2Gnow system; prompt payment obligations; subcontractor substitution; and contract close out.

3. Adopt Develop Performance Measures for Program Success

The County should develop quantitative performance measures for certified firms and the overall success of the program to evaluate its effectiveness in reducing the systemic barriers identified by the study. In addition to meeting the annual goal(s), possible benchmarks might include, the number of bids or

16. See 49 C.F.R Part 26, Appendix D, “Mentor-Protégé Guidelines”.

proposals and the dollar amount of the awards, the goal shortfall where the bidder submitted good faith efforts to meet the contract goal; the number and dollar amount of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal; the number, type, and dollar amount of M/WBE substitutions during contract performance; increased bidding by certified firms; increased prime contract awards to certified firms; and increased “capacity” of certified firms as measured by bonding limits such as size of jobs or profitability.

II. LEGAL STANDARDS FOR CONTRACTING AFFIRMATIVE ACTION PROGRAMS

A. Summary of Constitutional Equal Protection Standards

To be effective, enforceable, and legally defensible, a race-based affirmative action program for public sector contracts, regardless of funding source, must meet the judicial test of constitutional “strict scrutiny”. Strict scrutiny is the highest level of judicial review. Strict scrutiny analysis is comprised of two prongs:

1. The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.
 - Any remedies adopted must be “narrowly tailored” to that discrimination; the program must be directed at the types and depth of discrimination identified.¹⁷

The compelling governmental interest prong has been met through two types of proof:

1. Statistical evidence of the underutilization of minority or women firms by the agency and/or throughout the agency’s geographic and industry market area compared to their availability in the market area. These are disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority- and women-owned firms in the market area and seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.¹⁸ Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

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

18. *Id.* at 509.

The narrow tailoring prong has been met by satisfying five factors to ensure that the remedy “fits” the evidence:

1. The necessity of relief;
2. The efficacy of race-neutral remedies at overcoming identified discrimination;
3. The flexibility and duration of the relief, including the availability of waiver provisions;
4. The relationship of numerical goals to the relevant market; and
5. The impact of the relief on the rights of third parties.

In *Adarand v. Peña*,¹⁹ the United States Supreme Court extended the analysis of strict scrutiny to race-based federal enactments such as the United States Department of Transportation (“USDOT”) Disadvantaged Business Enterprise (“DBE”) program for federally assisted transportation contracts.

State and local governments, must have a compelling governmental interest for the use of race, and the remedies adopted must be narrowly tailored to that evidence.²⁰

Most federal courts, including the Fifth Circuit,²¹ have subjected preferences for Women-Owned Business Enterprises (“WBEs”) to “intermediate scrutiny”. Gender-based classifications must be supported by an “exceedingly persuasive justification” and be “substantially related to the objective”.²² However, appellate courts have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the DBE program²³ or held that the results would be the same under strict scrutiny.²⁴

Classifications not based upon a suspect class (race, ethnicity, religion, national origin or gender) are subject to the lesser standard of review called “rational basis” scrutiny.²⁵ The courts have held there are no equal protection implications under the Fourteenth Amendment of the United States Constitution for groups not subject to systemic discrimination.²⁶ In contrast to strict scrutiny and to intermediate

19. *Adarand v. Peña*, 515 U.S. 200 (1995) (“*Adarand III*”).

20. See, for example, *Croson*, 488 U.S. at 492-493; *Adarand III*, 515 U.S. 200, 227; see generally *Fisher v. University of Texas*, 133 S. Ct. 2411 (2013).

21. *W.H. Scott Construction Co., Inc. v. City of Jackson, Mississippi*, 199 F.3d 206, 215 n.9 (5th Cir. 1999).

22. Cf. *United States v. Virginia*, 518 U.S. 515, 532 n.6 (1996).

23. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 720 (7th Cir. 2007) (“*Northern Contracting III*”).

24. *Western States Paving Co., Inc. v. Washington State Department of Transportation*, 2013 W.L.1607239 at *13 fn.6 (9th Cir. 2005).

25. See, generally, *Coral Construction Co v. King County*, 941 F. 2d 910 (9th Cir. 1991); *Equal. Found. v. City of Cincinnati*, 128 F. 3d 289 (6th Cir. 1997).

26. *United States v. Carolene Products Co.*, 304 U.S. 144 (1938).

scrutiny, rational basis means the governmental action must be “rationally related” to a “legitimate” government interest.²⁷ Thus, preferences for persons with disabilities or veteran status may be enacted with vastly less evidence than that required for race- or gender-based measures to combat historic discrimination.²⁸

Unlike most legal challenges, the defendant bears the initial burden of producing “strong evidence” in support of its race-conscious program.²⁹ As held by the Fifth Circuit, the plaintiff must then proffer evidence to rebut the government’s case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.³⁰ “[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.”³¹

A plaintiff “cannot meet its burden of proof through conjecture and unsupported criticism of [the government’s] evidence.”³² To successfully rebut the government’s evidence, a plaintiff must introduce “credible, particularized evidence” that rebuts the government’s showing of a strong basis in evidence.³³ For example, in the challenge to the Minnesota and Nebraska DBE programs, “plaintiffs presented evidence that the data was susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in federally assisted highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.”³⁴ When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.³⁵ A plaintiff cannot rest upon general criticisms of studies or other related evidence; it must meet its burden that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation or government program illegal.³⁶

27. *Heller v. Doe*, 509 U.S. 312, 320 (1993).

28. The standard applicable to status based on sexual orientation of gender identity has not yet been clarified by the courts.

29. *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6th Cir. 1994).

30. *Scott*, 199 F.3d at 219; *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1166 (10th Cir. 2000), cert. granted, 532 U.S. 941 (2001), then dismissed as improvidently granted, 534 U.S. 103 (2001) (“*Adarand VII*”).

31. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 916 (11th Cir. 1997) (“*Engineering Contractors II*”).

32. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989, cert. denied, 540 U.S. 1027 (2003) (10th Cir. 2003) (“*Concrete Works IV*”).

33. *H.B. Rowe v. North Carolina Department of Transportation*, 615 F.3d 233, 241-242 (4th Cir. 2010); *Midwest Fence Corp. v. US Department of Transportation, Illinois Department of Transportation, Illinois State Toll Highway Authority*, 840 F.3d 932 (7th Cir. 2016) (“*Midwest Fence II*”).

34. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d. 964, 970 (8th Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

35. *Coral Construction*, 941 F. 2d at 921; *Engineering Contractors II*, 122 F.3d at 916

To meet strict scrutiny, studies have been conducted to gather the statistical and anecdotal evidence necessary to support the use of race- and gender-conscious measures to combat discrimination. These are commonly referred to as “disparity studies” because they analyze any disparities between the opportunities and experiences of minority- and women-owned firms and their actual utilization compared to White male-owned businesses. Quality studies also examine the elements of the agency’s program to determine whether it is sufficiently narrowly tailored. The following is a detailed discussion of the legal parameters and the requirements for conducting studies to support defensible programs.

B. Elements of Strict Scrutiny

In its decision in *City of Richmond v. J.A. Croson Co.*, the United States Supreme Court established the constitutional contours of permissible race-based public contracting programs. Reversing long established Equal Protection jurisprudence, the Court, for the first time, extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that inures to the benefit of these victims of historic discrimination. Strict scrutiny requires that a government entity prove both its “compelling governmental interest” in remediating identified discrimination based upon “strong evidence” and that the measures adopted to remedy that discrimination are “narrowly tailored” to that evidence. However benign the government’s motive, race is always so suspect a classification that its use must pass the highest constitutional test of “strict scrutiny”.

The Court struck down the City of Richmond’s Minority Business Enterprise Plan (“Plan”) because it failed to satisfy the strict scrutiny analysis applied to “race-based” government programs. The City’s “set-aside” Plan required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to Minority-Owned Business Enterprises (“MBEs”). A business located anywhere in the nation was eligible to participate so long as it was at least 51 percent owned and controlled by minority citizens or lawfully-admitted permanent residents.

The Plan was adopted following a public hearing during which no direct evidence was presented that the City had discriminated on the basis of race in contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond’s population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors’ associations were virtually

36. *Adarand VII*, 228 F.3d at 1166; *Engineering Contractors II*, 122 F.3d at 916; *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1522-1523 (10th Cir. 1994) (“*Concrete Works II*”); *Webster v. Fulton County, Georgia*, 51 F.Supp.2d 1354, 1364 (N.D. Ga. 1999); see also *Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

all White; (c) the City Attorney’s opinion that the Plan was constitutional; and (d) generalized statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

In affirming the court of appeals’ determination that the Plan was unconstitutional, Justice Sandra Day O’Connor’s plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own active participation in discrimination:

[A] state or local subdivision...has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction... [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment...[I]f the City could show that it had essentially become a “passive participant” in a system of racial exclusion ...[it] could take affirmative steps to dismantle such a system.”³⁷

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by notions of racial inferiority or blatant racial politics. This highest level of judicial review “smokes out” illegitimate uses of race by ensuring that the legislative body is pursuing an important enough goal to warrant use of a highly suspect tool.³⁸ It also ensures that the means chosen “fit” this compelling goal so closely that there is little or no likelihood that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny is designed to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.

Richmond’s evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond’s minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant market area or their utilization as subcontractors on City projects.

According to Justice O’Connor, the extremely low MBE membership in local contractors’ associations could be explained by “societal” discrimination or perhaps Blacks’ lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own

37. 488 U.S. at 491-92.

38. See also *Grutter v. Bollinger*, 539 U.S. 306, 327 (2003) (“Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decisionmaker for the use of race in that particular context.”).

anti-discrimination ordinance. Finally, the City could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and, in any event, it was exercising its powers under Section Five of the Fourteenth Amendment. Local governments are further constrained by the Amendment's Equal Protection Clause.

In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."³⁹

This analysis was applied only to Blacks. The Court emphasized that there was "absolutely no evidence" of discrimination against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."⁴⁰

Having found that Richmond had not presented evidence in support of its compelling interest in remediating discrimination—the first prong of strict scrutiny—the Court made two observations about the narrowness of the remedy—the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual MBE had suffered discrimination.⁴¹ The Court noted that the City "does not even know how many MBEs in the relevant market are qualified to undertake prime or subcontracting work in public construction projects."⁴²

Apparently recognizing that her opinion might be misconstrued to eliminate all race-conscious contracting efforts, Justice O'Connor closed with these admonitions:

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses

39. *Croson*, 488 U.S. at 510.

40. *Id.*

41. *See Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

42. *Croson*, 488 U.S. at 502.

from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion... Moreover, 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.⁴³

While much has been written about *Croson*, it is worth stressing what evidence was and was not before the Court. First, Richmond presented *no* evidence regarding the availability of MBEs to perform as prime contractors or subcontractors and *no* evidence of the utilization of minority-owned subcontractors on City contracts.⁴⁴ Nor did Richmond attempt to link the remedy it imposed to any evidence specific to the program; it used the general population of the City rather than any measure of business availability.

Some commentators have taken this dearth of any particularized proof and argued that only the most particularized proof can suffice in all cases. They leap from the Court's rejection of Richmond's reliance on only the percentage of Blacks in the City's population to a requirement that only firms that bid or have the "capacity" or "willingness" to bid on a particular contract at a particular time can be considered in determining whether discrimination against Black businesses infects the local economy.⁴⁵

This argument has been rejected explicitly by some courts. In denying the plaintiff's summary judgment motion to enjoin the City of New York's M/WBE construction ordinance, the court stated:

[I]t is important to remember what the *Croson* plurality opinion did and did not decide. The Richmond program, which the *Croson* Court struck down, was insufficient because it was based on a comparison of the minority population in its entirety in Richmond, Virginia (50%) with the number of contracts awarded to minority businesses (0.67%). There were no statistics presented regarding the number of minority-owned

43. *Id.* at 509 (citations omitted).

44. *Id.* at 502.

45. *See, for example, Northern Contracting III*, 473 F.3d at 723.

contractors in the Richmond area, *Croson*, 488 U.S. at 499, and the Supreme Court was concerned with the gross generality of the statistics used in justifying the Richmond program. There is no indication that the statistical analysis performed by [the consultant] in the present case, which does contain statistics regarding minority contractors in New York City, is not sufficient as a matter of law under *Croson*.⁴⁶

Further, Richmond made no attempt to narrowly tailor a goal for the procurement at issue that reflected the reality of the project. Arbitrary quotas, and the unyielding application of those quotas, did not support the stated objective of ensuring equal access to City contracting opportunities. The *Croson* Court said nothing about the constitutionality of flexible goals based upon the availability of MBEs to perform the scopes of the contract in the government's local market area. In contrast, the USDOT DBE program avoids these pitfalls. 49 C.F.R. Part 26 "provides for a flexible system of contracting goals that contrasts sharply with the rigid quotas invalidated in *Croson*".

While strict scrutiny is designed to require clear articulation of the evidentiary basis for race-based decision-making and careful adoption of remedies to address discrimination, it is not, as Justice O'Connor stressed, an impossible test that no proof can meet. Strict scrutiny need not be "fatal in fact".

C. Establishing a "Strong Basis in Evidence" for Harris County's Minority- and Women-Owned Business Enterprise Program

The case law on the DBE program should guide the County's program for locally-funded contracts. Whether the program is called an M/WBE program or a DBE program or any other moniker, the strict scrutiny test applies. As discussed, 49 C.F.R. Part 26 has been upheld by every court, and local programs for Minority- and Women-Owned Business Enterprises ("M/WBEs") will be judged against this legal framework.⁴⁷ We note that programs for veterans, persons with disabilities, preferences based on geographic location or truly race- and gender-neutral small business efforts are not subject to strict scrutiny but rather the low level of scru-

46. *North Shore Concrete and Associates, Inc. v. City of New York*, 1998 U.S. Dist. Lexis 6785, *28-29 (E.D. N.Y. 1998); see also *Harrison & Burrowes Bridge Constructors, Inc. v. Cuomo*, 981 F.2d 50, 61-62 (2nd Cir. 1992) ("Croson made only broad pronouncements concerning the findings necessary to support a state's affirmative action plan"); cf. *Concrete Works II*, 36 F.3d at 1528 (City may rely on "data reflecting the number of MBEs and WBEs in the marketplace to defeat the challenger's summary judgment motion").

47. *Midwest Fence II*, 840 F.3d. at 953.

tiny called “rational basis.” Therefore, no evidence comparable to that in a disparity study is needed to enact such initiatives.

It is well established that disparities between an agency’s utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for the consideration of race- or gender-conscious remedies. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to their success will meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.⁴⁸ Specific evidence of discrimination or its absence may be direct or circumstantial and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.⁴⁹

Croson’s admonition that “mere societal” discrimination is not enough to meet strict scrutiny is met where the government presents evidence of discrimination in the industry targeted by the program. “If such evidence is presented, it is immaterial for constitutional purposes whether the industry discrimination springs from widespread discriminatory attitudes shared by society or is the product of policies, practices, and attitudes unique to the industry... The genesis of the identified discrimination is irrelevant.” There is no requirement to “show the existence of specific discriminatory policies and that those policies were more than a reflection of societal discrimination.”⁵⁰

Harris County need not prove that it is itself guilty of discrimination to meet its burden. In upholding Denver’s M/WBE construction program, the court stated that Denver can show its compelling interest by “evidence of private discrimination in the local construction industry coupled with evidence that it has become a passive participant in that discrimination...[by] linking its spending practices to the private discrimination.”⁵¹ Denver further linked its award of public dollars to discriminatory conduct through the testimony of M/WBEs that identified general contractors who used them on City projects with M/WBE goals but refused to use them on private projects without goals.

The following are the evidentiary elements courts have looked to in examining the basis for and determining the constitutional validity of race- and gender-conscious local programs and the steps in performing a disparity study necessary to meet those elements.

48. *Adarand VII*, 228 F.3d at 1166 (“statistical and anecdotal evidence are appropriate”).

49. *Id.*

50. *Concrete Works IV*, 321 F.3d at 976.

51. *Id.* at 977.

1. Define Harris County's Market Areas

The first step is to determine the market area in which the County operates. *Croson* states that a state or local government may only remedy discrimination within its own contracting market area. The City of Richmond was specifically faulted for including minority contractors from across the country in its program, based on national data considered by Congress.⁵² The County must therefore empirically establish the geographic and product dimensions of its contracting and procurement market area to ensure that the program meets strict scrutiny. This is a fact driven inquiry; it may or may not be the case that the market area is the government's jurisdictional boundaries.⁵³

A commonly accepted definition of geographic market area for disparity studies is the locations that account for at least 75 percent of the agency's contract and subcontract dollar payments.⁵⁴ Likewise, the accepted approach is to analyze those detailed industries that make up at least 75 percent of the prime contract and associated subcontract payments for the study period.⁵⁵ This produces the utilization results within the geographic market area.

2. Examine Disparities between Harris County's Utilization of M/WBEs and M/WBE Availability

Next, the study must estimate the availability of minorities and women to participate in the County's contracts as prime contractors and associated subcontractors compared to the County's utilization of such firms. The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and their utilization.

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise... In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.⁵⁶

52. *Croson*, 488 U.S. at 508.

53. *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

54. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>. ("National Disparity Study Guidelines")

55. *Id.* at pp. 50-51.

56. *Croson*, 488 U.S. at 509; see *Webster*, 51 F.Supp.2d at 1363, 1375.

This is known as the “disparity ratio” or “disparity index”. A disparity ratio measures the participation of a group in the government’s contracting opportunities by dividing that group’s utilization by the availability of that group and multiplying that result by 100. Courts have looked to disparity indices in determining whether strict scrutiny is satisfied.⁵⁷ An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80 percent” rule that a ratio less than 80 percent presents a *prima facie* case of discrimination.⁵⁸ Where possible, statistical techniques are applied to examine whether any disparities are significant. In addition to creating the disparity ratio, correct measures of availability are necessary to determine whether discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors, known as an “economy-wide” analysis.⁵⁹

To determine disparity ratios once utilization has been established, the next step is to calculate the availability of minority- and women-owned firms in the government’s market area. Based on the product and geographic utilization data, the study should calculate weighted M/WBE availability estimates of ready, willing and able firms in the County’s market. This is generally the “Custom Census” methodology recommended in the National Study Guidelines and repeatedly approved by the courts. This methodology includes both certified firms and non-certified firms owned by minorities or women.⁶⁰

The Custom Census methodology for disparity studies involves the following steps: 1. Develop directories of M/WBEs. 2. Define a subset of business data to establish the availability of all firms. 3. Merge the directory with the contract data file created during the utilization analysis. 4. Assign race, gender and 6-digit North American Industry Classification System codes. This analysis results in an overall availability estimate of the number of ready, willing and able M/WBEs that is a narrowly tailored, dollar-weighted average of all the underlying industry availability numbers, with larger weights applied to industries with relatively more spending and lower weights applied to industries with relatively

57. *Scott*, 199 F.3d at 218; see also *Concrete Works II*, 36 F.3d at 1526-1527; *O’Donnell Construction Co., Inc. v. State of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corporation v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).

58. 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”); see *Engineering Contractors II*, 122 F3d at 914.

59. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868 (Sept. 8, 2005) (“*Northern Contracting II*”) (IDOT’s custom census approach was supportable because “discrimination in the credit and bonding markets may artificially reduce the number of M/WBEs”).

60. See “*National Disparity Study Guidelines*,” Chapter III, pp. 33-34.

less spending. The availability figures should also be sub-divided by race, ethnicity, and gender.

This approach has several benefits. As held by the federal court of appeals in finding the Illinois Department of Transportation's program to be constitutional, the "remedial nature of [DBE programs] militates in favor of a method of D/M/W/SBE availability calculation that casts a broader net" than merely using bidders lists or other agency or government directories. A broad methodology is also recommended by the USDOT for the federal DBE program, which has been upheld by every court.⁶¹

Other methodologies relying only on vendor or bidder lists may overstate or understate availability as a proportion of the County's actual markets because they reflect only the results of the agency's own activities, not an accurate portrayal of marketplace behavior. Other methods of whittling down availability by using assumptions based on surveys with limited response rates or guesses about firms' capacities easily lead to findings that women and minority businesses no longer face discrimination or are unavailable, even when the firm is actually working on agency contracts.

Many plaintiffs have argued that studies must somehow control for "capacity" of M/WBEs to perform specific agency contracts. The definition of "capacity" has varied based upon the plaintiff's particular point of view, but it has generally meant firm age, firm size (full time employees), firm revenues, bonding limits and prior experience on agency projects (no argument has been made outside of the construction industry).

This test has been rejected by the courts when directly addressed by the plaintiff and the agency. As recognized by the courts and the National Model Disparity Study Guidelines, these capacity factors are not race- and gender-neutral variables. Discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors. In a perfectly discriminatory system, M/WBEs would have no "capacity" because they would have been prevented from developing any "capacity". That certainly would not mean that there was no discrimination or that the government must sit by helplessly and continue to award tax dollars within the "market failure" of discrimination and without recognition of systematic, institutional race- and gender-based barriers. It is these types of "capacity" variables where barriers to full and fair opportunities to compete will be manifested. Capacity limitations on availability would import the current effects of past discrimination into the model, because if M/WBEs are newer or smaller because of discrimination, then controlling for those vari-

61. See "Tips for Goal Setting in the Disadvantaged Business Enterprise (DBE) Program", https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf.

ables will mask the phenomenon of discrimination that is being studied. In short, identifiable indicators of capacity are themselves impacted and reflect discrimination. The courts have agreed. Based on expert testimony, judges understand that factors such as size and experience reflect outcomes influenced by race and gender: “M/WBE construction firms are generally smaller and less experienced *because* of discrimination.”⁶²

To rebut this framework, a plaintiff must proffer its own study showing that the disparities disappear when whatever variables it believes are important are held constant and that controlling for firm specialization explained the disparities.⁶³ Additionally, *Croson* does not “require disparity studies that measure whether construction firms are able to perform a *particular contract*.”⁶⁴

There are also practical reasons not to attempt to circumscribe availability through “capacity” limitations. First, there is no agreement on what variables are relevant or how those variables are to be measured for the purpose of examining whether race and gender barriers impede the success of minority and women entrepreneurs. For example, a newly formed firm might be the result of a merger of much older entities or have been formed by highly experienced owners; it is unclear how such variations would shed light on the issues in a disparity study. Second, since the amount of necessary capacity will vary from contract to contract, there is no way to establish universal standards that would satisfy the capacity limitation. Third, firms’ capacities are highly elastic. Businesses can add staff, rent equipment, hire subcontractors or take other steps to be able to perform a particular scope on a particular contract. Whatever a firm’s capacity might have been at the time of the study, it may well have changed by the time the agency seeks to issue a specific future solicitation. Fourth, there are no reliable data sources for the type of information usually posited as important by those who seek to reduce availability estimates using capacity factors. While a researcher might have information about firms that are certified as M/WBEs or that are prequalified by an agency (which usually applies only to construction firms), there is no database for that information for non-certified firms, especially white male-owned firms that usually function as subcontractors. Any adjustment to the numerator (M/WBEs) must also be made to the denominator (all firms), as a researcher cannot assume that all white male-owned firms have adequate capacity but that M/WBEs do not.

62. *Concrete Works IV*, 321 F.3d at 983 (emphasis in the original).

63. Conjecture and unsupported criticism of the government are not enough. The plaintiff must rebut the government’s evidence and introduce “credible, particularized evidence” of its own. See *Midwest Fence II*, 840 F.3d at 942 (upholding the Illinois Tollway’s program for state-funded contracts modeled after Part 26 and based on CHA’s expert testimony).

64. *Croson*, 488 U.S. at 508 (emphasis in the original).

Capacity variables should be examined at the economy-wide level of business formation and earnings, discussed in Chapter IV, not at the first stage of the analysis, to reduce the downward bias that discrimination imposes on M/WBEs' availability and the upward bias enjoyed by non-M/WBEs. These factors should also be explored during anecdotal data collection, discussed in Chapter V. They are also relevant to contract goal setting, where the agency must use its judgment about whether to adjust the initial goal that results from the study data based on current market conditions and current firm availability, discussed in Chapter VI.

Harris County need not prove that the statistical inferences of discrimination are "correct". In upholding Denver's M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver's determination that remedial action was necessary need not have been based upon "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of market area discrimination was properly used to meet strict scrutiny. To rebut this type of evidence, the plaintiff must prove by a preponderance of the evidence that such proof does not support those inferences.⁶⁵

Nor must the County demonstrate that the "ordinances will *change* discriminatory practices and policies" in the local market area; such a test would be "illogical" because firms could defeat the remedial efforts simply by refusing to cease discriminating.⁶⁶

Next, Harris County need not prove that private firms directly engaged in any discrimination in which the government passively participates do so intentionally, with the purpose of disadvantaging minorities and women.

Denver's only burden was to introduce evidence which raised the inference of discriminatory exclusion in the local construction industry and link its spending to that discrimination.... Denver was under no burden to identify any specific practice or policy that resulted in discrimination. Neither was Denver required to demonstrate that the purpose of any such practice or policy was to disadvantage women or minorities. To impose such a burden on a municipality would be tantamount to requiring proof of discrimination and would eviscerate any reliance the municipality could place on statistical studies and anecdotal evidence.⁶⁷

65. *Concrete Works IV*, 321 F. 3d at 971.

66. *Id.* at 973 (emphasis in the original).

67. *Id.* at 971.

Similarly, statistical evidence by its nature cannot identify the individuals responsible for the discrimination; there is no need to do so to meet strict scrutiny, as opposed to an individual or class action lawsuit.⁶⁸

3. Analyze Economy-Wide Evidence of Race- and Gender-Based Disparities

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs, their earnings from such businesses, and their access to capital markets are highly relevant to the determination of whether the market functions properly for all firms regardless of the race or gender of their ownership. These analyses contributed to the successful defense of Chicago's construction program. As similarly explained by the Tenth Circuit, this type of evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs.... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.⁶⁹

Business discrimination studies and lending formation studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination. "Evidence that private discrimination results in barriers to business formation is

68. *Id.* at 973.

69. *Adarand VII*, 228 F.3d at 1147, 1168-69.

relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts.”⁷⁰ Despite the contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education”, “culture” and “religion”.

For example, in unanimously upholding the DBE Program for federal-aid transportation contracts, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.⁷¹ The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.⁷²

4. Evaluate Anecdotal Evidence of Race- and Gender-Based Barriers

A study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities because it is relevant to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes. As observed by the Supreme

70. *Id.*

71. *Id.*; *Western States*, 407 F.3d at 993; *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS 3226 at *64 (N.D. Ill., Mar. 3, 2004) (“*Northern Contracting I*”).

72. *Sherbrooke*, 345 F.3d. at 970; *see, also, Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

Court, anecdotal evidence can be persuasive because it “brought the cold [statistics] convincingly to life.”⁷³ Testimony about discrimination practiced by prime contractors, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority firms’ business formation and to their success on governmental projects.⁷⁴ While anecdotal evidence is insufficient standing alone, “[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government’s] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”⁷⁵ “[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”⁷⁶

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”⁷⁷ Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”⁷⁸

D. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program for Harris County

Even if the County has a strong basis in evidence to believe that race-based measures are needed to remedy identified discrimination, the program must still be narrowly tailored to that evidence. As discussed above, programs that closely mirror those of the U.S. Department of Transportation’s Disadvantaged Business

73. *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

74. *Adarand VII*, 228 F.3d at 1168-1172.

75. *Concrete Works II*, 36 F.3d at 1520,1530.

76. *Engineering Contractors II*, 122 F.3d at 926.

77. *Id.* at 249.

78. *Concrete Works IV*, 321 F.3d at 989.

Enterprise Program⁷⁹ have been upheld using that framework.⁸⁰ The courts have repeatedly examined the following factors in determining whether race-based remedies are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.⁸¹

1. Consider Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches are necessary components of a defensible and effective M/WBE program⁸² and the failure to seriously consider such remedies has been fatal to several programs.⁸³ Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by the County without resorting to the use of race or gender in its decision-making. Effective remedies include unbundling of contracts into smaller units, providing technical support, and developing programs to address issues of financing, bonding, and insurance important to all small and emerging businesses.⁸⁴ Further, governments have

79. 49 C.F.R. Part 26.

80. *See, e.g., Midwest Fence II*, 840 F.3d at 953 (upholding the Illinois Tollway’s program for state-funded contracts modeled after Part 26 and based on CHA’s expert testimony).

81. *United States v. Paradise*, 480 U.S. 149, 171 (1987); *see also Sherbrooke*, 345 F.3d at 971-972.

82. *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Associated General Contractors of Ohio v. Drabik*, 214 F.3d at 738 (“*Drabik II*”); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586 (3rd Cir. 1996) (“*Philadelphia III*”) (City’s failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies); *cf. Aiken*, 37 F.3d at 1164 (failure to consider race-neutral method of promotions suggested a political rather than a remedial purpose).

83. *See, e.g., Florida A.G.C. Council, Inc. v. State of Florida*, Case No.: 4:03-CV-59-SPM at 10 (N. Dist. Fla. 2004) (“There is absolutely no evidence in the record to suggest that the Defendants contemplated race-neutral means to accomplish the objectives” of the statute.); *Engineering Contractors II*, 122 F.3d at 928.

84. *See* 49 CFR § 26.51.0.

a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.⁸⁵

The requirement that the agency must meet the maximum feasible portion of the goal through race-neutral measures, as well as estimate that portion of the goal that it predicts will be met through such measures, has been central to the holdings that the DBE program regulations meet narrow tailoring.⁸⁶ The highly disfavored remedy of race-based decision making should be used only as a last resort.

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.⁸⁷ While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative...however irrational, costly, unreasonable, and unlikely to succeed such alternative might be... [S]ome degree of practicality is subsumed in the exhaustion requirement.”⁸⁸

2. Set Targeted M/WBE Goals

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.⁸⁹ For example, the DBE program regulations require that the overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient’s federally assisted contracts.⁹⁰ “Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*.”⁹¹

Goals can be set at various levels of particularity and participation. The County may set an overall, aspirational goal for its annual, aggregate spending. Annual goals can be further disaggregated by race and gender. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities

85. *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

86. *See, e.g., Sherbrooke*, 345 F.3d. at 973

87. *Grutter*, 529 U.S. at 339.

88. *Coral Construction*, 941 F.2d at 923.

89. *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35 percent M/WBE participation in County contracts); *see also Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore, et al.*, 83 F.Supp.2d 613, 621 (D. Md. 2000) (“*Baltimore I*”).

90. 49 C.F.R. § 26.45 (b)

91. *Id.*

and non-minority women,⁹² to separate goals for each minority group and women.⁹³

The Eighth Circuit has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the court noted that “[t]hough the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets.”⁹⁴ However, sheer speculation cannot form the basis for an enforceable measure.⁹⁵

It is settled case law that goals for a particular solicitation should reflect the particulars of the contract, not reiterate annual aggregate targets; goals must be contract specific. “Standard” goals are not defensible. Contract goals must be based upon availability of M/WBEs to perform the anticipated scopes of the contract, location, progress towards meeting annual goals, and other factors. Not only is this legally mandated,⁹⁶ but this approach also reduces the need to conduct good faith efforts reviews, as well as the temptation to create “front” companies and sham participation to meet unreasonable contract goals. While this is more labor intensive than defaulting to the annual, overall goals, there is no option to avoid meeting narrow tailoring because to do so would be more burdensome.

3. Ensure Flexibility of Goals and Requirements

It is imperative that remedies not operate as fixed quotas.⁹⁷ A M/WBE program must provide for contract awards to firms who fail to meet the contract goals but make good faith efforts to do so.⁹⁸ In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT’s DBE program.⁹⁹ This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.¹⁰⁰ Further, firms that meet the goals

92. See 49 C.F.R. §26.45(h) (overall goal must not be subdivided into group-specific goals).

93. See *Engineering Contractors II*, 122 F.3d at 900 (separate goals for Blacks, Hispanics and women).

94. *Sherbrooke*, 345 F.3d. at 972.

95. *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003) 740 (City’s MBE and WBE goals were “formulistic” percentages not related to the availability of firms).

96. See *Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

97. See 49 C.F.R. 26.43 (quotas are not permitted and setaside contracts may be used only in limited and extreme circumstances “when no other method could be reasonably expected to redress egregious instances of discrimination”).

98. See, e.g., *BAGC v. Chicago*, 298 F. Supp.2d at 740 (“Waivers are rarely or never granted...The City program is a rigid numerical quota...formulistic percentages cannot survive strict scrutiny.”).

99. *Croson*, 488 U.S. at 508; see also *Adarand VII*, 228 F.3d at 1181.

100. See, e.g., *Sherbrooke*, 345 F.3d. at 972; *Webster v. Fulton County*, 51 F. Supp. 2d 1354, 1380 (N.D. Ga. 1999, *aff’d per curiam*, 218 F. 3d 1267 (11th Cir. 2000).

cannot be favored over those who made good faith efforts and firms that exceed the goals cannot be favored over those that did not exceed the goals.

4. Review Program Eligibility Over-Inclusiveness and Under-Inclusiveness

The over- or under-inclusiveness of those persons to be included in the County's program is an additional consideration and addresses whether the remedies truly target the evil identified. The "fit" between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

The groups to include must be based upon the evidence.¹⁰¹ The "random inclusion" of ethnic or racial groups that may never have experienced discrimination in the entity's market area may indicate impermissible "racial politics".¹⁰² In striking down Cook County, Illinois' construction program, the Seventh Circuit remarked that a "state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women."¹⁰³ However, at least one court has held some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.¹⁰⁴ Therefore, remedies should be limited to those firms owned by the relevant minority groups as established by the evidence that have suffered actual harm in the market area.¹⁰⁵

Next, the firm's owner(s) must be disadvantaged. The DBE Program's rebuttable presumptions of social and economic disadvantage, including the requirement that the disadvantaged owner's personal net worth not exceed a certain ceiling and that the firm must meet the Small Business Administration's size definitions for its industry, have been central to the courts' holdings that it is narrowly tailored.¹⁰⁶ "[W]ealthy minority owners and wealthy minority-owned

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101. *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990, 1007-1008 (3rd Cir. 1993) ("*Philadelphia II*") (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Native Americans).
102. *Webster*, 51 F.Supp.2d at 1380-1381.
103. *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 646 (7th Cir. 2001) ("*Cook II*").
104. *Concrete Works IV*, 321 F.3d at 971 (Denver introduced evidence of bias against each group; that is sufficient).
105. *Rowe*, 615 F.3d at 233, 254 ("[T]he statute contemplates participation goals only for those groups shown to have suffered discrimination. As such, North Carolina's statute differs from measures that have failed narrow tailoring for over-inclusiveness.").
106. *Sherbrooke*, 345 F.3d at 973; see also *Grutter*, 539 U.S. at 341; *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); cf. *Associated General Contractors of Connecticut v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992), *vacated on other grounds*, 41 F.3d 62 (2nd Cir. 1992) (definition of "disadvantage" was vague and unrelated to goal).

firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”¹⁰⁷ Further, anyone must be able to challenge the disadvantaged status of any firm.¹⁰⁸

5. Evaluate the Burden on Third Parties

Failure to make “neutral” changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.¹⁰⁹ However, “innocent” parties can be made to share some of the burden of the remedy for eradicating racial discrimination.¹¹⁰ The burden of compliance need not be placed only upon those firms directly responsible for the discrimination. The proper focus is whether the burden on third parties is “too intrusive” or “unacceptable”.

Burdens must be proven and cannot constitute mere speculation by a plaintiff.¹¹¹ “Implementation of the race-conscious contracting goals for which [the federal authorizing legislation] provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although the result places a very real burden on non-DBE firms, this fact alone does not invalidate [the statute]. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities.”¹¹²

Narrow tailoring does permit certified firms acting as prime contractors to count their self-performance towards meeting contract goals, if the study finds discriminatory barriers to prime contract opportunities and there is no requirement that a program be limited only to the subcontracting portions of contracts. The DBE program regulations provide this remedy for discrimination against DBEs seeking prime work,¹¹³ and the regulations do not limit the application of the program to only subcontracts.¹¹⁴ The trial court in upholding the

107. *Sherbrooke*, 345 F.3d. at 973.

108. 49 C.F.R. §26.87.

109. *See Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County*, 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (“*Engineering Contractors I*”) (County chose not to change its procurement system).

110. *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183 (“While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities”); *cf. Northern Contracting II*, at *5 (“Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.”).

111. *Rowe*, 615 F.3d at 254 (prime bidder had no need for additional employees to perform program compliance and need not subcontract work it can self-perform).

112. *Western States*, 407 F.3d at 995.

Illinois DOT's DBE program explicitly recognized that barriers to subcontracting opportunities also affect the ability of DBEs to compete for prime work on a fair basis.

This requirement that goals be applied to the value of the entire contract, not merely the subcontracted portion(s), is not altered by the fact that prime contracts are, by law, awarded to the lowest bidder. While it is true that prime contracts are awarded in a race- and gender-neutral manner, the Regulations nevertheless mandate application of goals based on the value of the entire contract. Strong policy reasons support this approach. Although laws mandating award of prime contracts to the lowest bidder remove concerns regarding direct discrimination at the level of prime contracts, the indirect effects of discrimination may linger. The ability of DBEs to compete successfully for prime contracts may be indirectly affected by discrimination in the subcontracting market, or in the bonding and financing markets. Such discrimination is particularly burdensome in the construction industry, a highly competitive industry with tight profit margins, considerable hazards, and strict bonding and insurance requirements.¹¹⁵

6. Examine the Duration and Review of the Program

Race-based programs must have duration limits. A race-based remedy must "not last longer than the discriminatory effects it is designed to eliminate."¹¹⁶ The unlimited duration and lack of review were factors in the court's holding that the City of Chicago's M/WBE construction program was no longer narrowly tailored; Chicago's program was based on 14-year-old information, which while it supported the program adopted in 1990, no longer was sufficient standing alone to justify the City's efforts in 2004.¹¹⁷ How old is too old is

113. 49 C.F.R. § 26.53(g) ("In determining whether a DBE bidder/offeror for a prime contract has met the contractor goal, count the work the DBE has committed to perform with its own forces as well as the work that it has committed to be performed by DBE subcontractors and suppliers.").

114. 49 C.F.R. § 26.45(a)(1).

115. *Northern Contracting II*, 2005 U.S. Dist. LEXIS 19868 at 74.

116. *Adarand III*, 515 U.S. at 238.

117. *BAGC v. Chicago*, 298 F.Supp.2d at 739.

not definitively answered,¹¹⁸ but governments would be wise to analyze data at least once every five or six years.

In contrast, the USDOT DBE program's periodic review by Congress has been repeatedly held to provide adequate durational limits.¹¹⁹ Similarly, "two facts [were] particularly compelling in establishing that [North Carolina's M/WBE program] was narrowly tailored: the statute's provisions (1) setting a specific expiration date and (2) requiring a new disparity study every five years."¹²⁰

118. See, e.g., *Associated General Contractors of Ohio, Inc. v. Drabik*, 50 F.Supp.2d 741, 747, 750 (S.D. Ohio 1999) ("*Drabik I*") ("A program of race-based benefits cannot be supported by evidence of discrimination which is now over twenty years old.... The state conceded that it had no additional evidence of discrimination against minority contractors, and admitted that during the nearly two decades the Act has been in effect, it has made no effort to determine whether there is a continuing need for a race-based remedy."); *Brunet v. City of Columbus*, 1 F.3d 390, 409 (6th Cir. 1993) (fourteen-year-old evidence of discrimination "too remote to support a compelling governmental interest.").

119. See *Western States*, 407 F.3d at 995.

120. *Rowe*, 615 F.3d at 253.

III. UTILIZATION, AVAILABILITY AND DISPARITY ANALYSES FOR HARRIS COUNTY CONTRACTS

A. Contract Data Overview

We analyzed County contract data for all departments other than the Harris Health System for the years FY2016 through the first quarter of FY2019. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the County’s contract records (*e.g.*, industry type; zip codes; NAICS codes of prime contractors and subcontractors; non-certified subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File (“FCDF”) for analysis contained 478 contracts, with a net paid amount of \$1,260,717,228; subcontractors received 1,433 contracts. Prime contractors received \$980,222,104 of the net paid amount; subcontractors received \$280,495,121 of the net paid amount.

The FCDF was used to determine the geographic and product markets for the analyses. It was also used to estimate the County’s utilization of M/WBEs. We then used the FCDF, in combination with other databases (as described below), to calculate M/WBE unweighted and weighted availability in the County’s marketplace.

For purposes of goal setting, the availability estimates are weighted by the County’s actual spending patterns, as determined by the NAICS codes it utilized. Weighting availability results is a more accurate picture of what firms are available to participate in the agency’s opportunities. For example, high availability in a NAICS code in which minimal dollars are spent would give the impression that there are more M/WBEs that can perform work on agency contracts than are actually ready, willing and able. Conversely, a low availability in a high dollar scope would understate the potential dollars that could be spent with M/WBEs.¹²¹

121. This is why the USDOT “Tips for Goal Setting” urges recipients to weight their headcount of firms by dollar spent. See <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.

B. The County’s Product and Geographic Markets

As discussed in Chapter II, a defensible disparity study must determine empirically the industries that comprise the County’s product or industry market. The accepted approach is to analyze those detailed industries, as defined by 6-digit North American Industry, Classification System (“NAICS”) codes¹²² that make up at least 75 percent of the prime contract and subcontract payments for the study period.¹²³ However, for this study, we went further, and applied a “one percent” rule, whereby we analyzed NAICS codes for contracts where the share of the total contract dollars (prime contracts and subcontract dollars combined) was at least one percent; where the share of the prime contract dollars was at least one percent of the total prime contract dollars; and where the share of subcontract dollars was at least one percent of the total subcontract dollars. We took this approach to assure a comprehensive analysis of the County’s activities.

1. The County’s Unconstrained Product Market

Tables 3-1 through 3-3 present the NAICS codes used to define the County’s unconstrained product market, that is, the County’s spending without regard to the geographic location of its vendors.

Table 3-1: Industry Percentage Distribution of Contracts by Dollars
All Contracts

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	42.3% ^a	42.3%
237110	Water and Sewer Line and Related Structures Construction	7.8%	50.1%
236220	Commercial and Institutional Building Construction	6.4%	56.5%
238210	Electrical Contractors and Other Wiring Installation Contractors	5.2%	61.7%
562111	Solid Waste Collection	4.8%	66.6%
238110	Poured Concrete Foundation and Structure Contractors	4.2%	70.8%

122. www.census.gov/eos/www/naics.

123. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>. (“National Disparity Study Guidelines”).

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238910	Site Preparation Contractors	2.9%	73.7%
238990	All Other Specialty Trade Contractors	2.5%	76.3%
237990	Other Heavy and Civil Engineering Construction	2.4%	78.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	2.0%	80.7%
541330	Engineering Services	1.8%	82.5%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	1.6%	84.1%
541512	Computer Systems Design Services	1.0%	85.1%
TOTAL			100.0%^b

a. This very high share of County spending on NAICS code 237310 results from the inclusion of spending by the Harris County Toll Road Authority in the database.

b. The County’s spending across an additional 181 NAICS codes comprised 14.9 percent of all spending. A chart of all of these NAICS codes is in Appendix D.

Source: CHA analysis of Harris County data.

Table 3-2: Industry Percentage Distribution of Contracts by Dollars
Prime Contracts

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	52.2%	52.2%
237110	Water and Sewer Line and Related Structures Construction	9.2%	61.4%
236220	Commercial and Institutional Building Construction	8.2%	69.5%
562111	Solid Waste Collection	6.2%	75.8%
237990	Other Heavy and Civil Engineering Construction	2.8%	78.5%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	2.1%	80.6%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238210	Electrical Contractors and Other Wiring Installation Contractors	1.8%	82.3%
238110	Poured Concrete Foundation and Structure Contractors	1.7%	84.1%
238990	All Other Specialty Trade Contractors	1.7%	85.8%
541330	Engineering Services	1.5%	87.3%
541512	Computer Systems Design Services	1.3%	88.6%
238910	Site Preparation Contractors	1.0%	89.6%
524114	Direct Health and Medical Insurance Carriers	0.9%	90.5%
TOTAL			100.0%^a

a. The County's spending across an additional 85 NAICS codes comprised 9.5 percent of all spending. A chart of all of these NAICS codes is in Appendix D.

Source: CHA analysis of Harris County data.

**Table 3-3: Industry Percentage Distribution of Contracts by Dollars
Subcontracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238210	Electrical Contractors and Other Wiring Installation Contractors	17.4%	17.4%
238110	Poured Concrete Foundation and Structure Contractors	12.8%	30.2%
238910	Site Preparation Contractors	9.7%	39.9%
237310	Highway, Street, and Bridge Construction	7.8%	47.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	7.4%	55.2%
238990	All Other Specialty Trade Contractors	5.5%	60.7%
238120	Structural Steel and Precast Concrete Contractors	3.0%	63.7%
237110	Water and Sewer Line and Related Structures Construction	2.9%	66.5%
541330	Engineering Services	2.8%	69.3%
238310	Drywall and Insulation Contractors	2.7%	72.0%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
327320	Ready-Mix Concrete Manufacturing	1.9%	74.0%
212312	Crushed and Broken Limestone Mining and Quarrying	1.9%	75.9%
238350	Finish Carpentry Contractors	1.5%	77.4%
237130	Power and Communication Line and Related Structures Construction	1.5%	78.8%
561730	Landscaping Services	1.4%	80.2%
561990	All Other Support Services	1.4%	81.6%
484110	General Freight Trucking, Local	1.3%	83.0%
237990	Other Heavy and Civil Engineering Construction	1.2%	84.2%
327390	Other Concrete Product Manufacturing	1.2%	85.4%
238140	Masonry Contractors	1.2%	86.6%
238390	Other Building Finishing Contractors	1.2%	87.7%
238150	Glass and Glazing Contractors	1.0%	88.8%
238160	Roofing Contractors	1.0%	89.8%
238290	Other Building Equipment Contractors	1.0%	90.8%
TOTAL			100.0%^a

a. The County's spending across an additional 128 NAICS codes comprised 9.2 percent of all spending. A chart of all of these NAICS codes is in Appendix D.

Source: CHA analysis of Harris County data.

2. The County's Geographic Market

The courts require that a local government limit the reach of its race- and gender-conscious contracting program to its geographic market area.¹²⁴ This element of the analysis must be empirically established.¹²⁵ To determine the relevant geographic market area, we applied the standard of identifying the firm locations that account for at least 75 percent of contract and subcontract

124. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 508 (1989) (Richmond was specifically faulted for including minority contractors from across the country in its program based on the national evidence that supported the USDOT DBE program).

125. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1520 (10th Cir. 1994) ("*Concrete Works II*") (to confine data to strict geographic boundaries would ignore "economic reality").

dollar payments in the contract data file.¹²⁶ Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 97.2 percent of the contract dollars in this market. Table 3-4 lists how these dollars were distributed across counties in Texas. Since Brazoria, Fort Bend, Galveston, Harris, and Montgomery Counties captures 96.3 percent of the in-state dollars, those five counties comprised the County’s geographic market.¹²⁷

Table 3-4: Distribution of Contracts in the County’s Product Market across Texas Counties

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Harris	82.7%	82.7%
Fort Bend	5.9%	88.6%
Montgomery	4.0%	92.6%
Brazoria	2.7%	95.2%
Galveston	1.1%	96.3%
Tarrant	1.0%	97.3%
Austin	0.7%	98.0%
Travis	0.6%	98.6%
Jefferson	0.3%	99.0%
Dallas	0.2%	99.2%
Bexar	0.2%	99.4%
Williamson	0.1%	99.5%
Collin	0.1%	99.6%
Burleson	0.1%	99.7%
Rockwall	0.1%	99.8%
Liberty	0.1%	99.9%
Hays	0.0%	99.9%
McLennan	0.0%	99.9%

126. *National Disparity Study Guidelines*, p. 49.

127. Seventeen counties reported values of 0.0 percent. There was County spending in these counties; however, the spending was less than \$262,000 and when the counties’ share of agency spending was rounded to one decimal place, the results were values of 0.0 percent.

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Walker	0.0%	99.9%
Waller	0.0%	99.9%
Milam	0.0%	99.9%
Angelina	0.0%	100.0%
Polk	0.0%	100.0%
Erath	0.0%	100.0%
Nacogdoches	0.0%	100.0%
Henderson	0.0%	100.0%
Harrison	0.0%	100.0%
Denton	0.0%	100.0%
Marion	0.0%	100.0%
Deaf Smith	0.0%	100.0%
Brazos	0.0%	100.0%
Smith	0.0%	100.0%
Bell	0.0%	100.0%
TOTAL		100.0%

Source: CHA analysis of Harris County data.

3. The County’s Utilization of M/WBEs on County Contracts

Having determined the County’s product and geographic market area for its contracts (and, therefore, the County’s *constrained* product market), the next step was to determine the dollar value of the County’s utilization of M/WBEs¹²⁸ as measured by payments to prime firms and subcontractors and disaggregated by race and gender. The County did not collect data for all subcontractors, as well as other records critical for the study. We therefore had to obtain missing data from prime vendors, a lengthy process, and reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

128. We use the terms “M/WBEs” to include firms owned by racial or ethnic minorities and white females that are not certified as M/WBEs by an agency recognized by the County. This casts the “broad net” required by the courts, as discussed in Chapter II.

Tables 3-5 through 3-7 present data on the utilization of total contract dollars paid in the constrained product market. The contract dollar shares in Table 3-5 are equivalent to the weight of each NAICS code spending. These weights were used to transform data from unweighted availability to weighted availability, discussed below.

Table 3-5: NAICS Code Distribution of the County’s Contract Dollars

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
212312	Crushed and Broken Limestone Mining and Quarrying	\$5,382,590.99	0.5%
236220	Commercial and Institutional Building Construction	\$80,868,622.09	7.4%
237110	Water and Sewer Line and Related Structures Construction	\$83,591,472.46	7.7%
237130	Power and Communication Line and Related Structures Construction	\$4,576,479.25	0.4%
237310	Highway, Street, and Bridge Construction	\$525,182,325.60 ^a	48.4%
237990	Other Heavy and Civil Engineering Construction	\$22,004,707.57	2.0%
238110	Poured Concrete Foundation and Structure Contractors	\$51,684,338.82	4.8%
238120	Structural Steel and Precast Concrete Contractors	\$7,129,174.40	0.7%
238140	Masonry Contractors	\$3,275,122.05	0.3%
238150	Glass and Glazing Contractors	\$1,826,921.66	0.2%
238160	Roofing Contractors	\$5,814,911.37	0.5%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$65,232,812.59	6.0%
238220	Plumbing, Heating, and Air-Conditioning Contractors	\$24,737,938.73	2.3%
238290	Other Building Equipment Contractors	\$5,474,012.72	0.5%
238310	Drywall and Insulation Contractors	\$10,361,355.91	1.0%
238350	Finish Carpentry Contractors	\$4,012,143.31	0.4%
238390	Other Building Finishing Contractors	\$3,625,844.16	0.3%
238910	Site Preparation Contractors	\$36,650,407.24	3.4%

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
238990	All Other Specialty Trade Contractors	\$30,087,324.06	2.8%
327320	Ready-Mix Concrete Manufacturing	\$5,421,734.50	0.5%
327390	Other Concrete Product Manufacturing	\$3,136,029.25	0.3%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	\$2,392,841.00	0.2%
484110	General Freight Trucking, Local	\$3,160,213.12	0.3%
524114	Direct Health and Medical Insurance Carriers	\$9,287,280.00	0.9%
541330	Engineering Services	\$21,056,013.61	1.9%
541512	Computer Systems Design Services	\$911,084.50	0.1%
561730	Landscaping Services	\$4,120,254.47	0.4%
561990	All Other Support Services	\$3,755,090.59	0.3%
562111	Solid Waste Collection	\$61,000,231.96	5.6%
Total		\$1,085,759,277.98	100.0%

a. Once again, this very high level of County spending on NAICS code 237310 results from the inclusion of spending by the Harris County Toll Road Authority in the database.

Source: CHA analysis of Harris County data.

**Table 3-6: Distribution of the County's Contract Dollars by Race and Gender
(total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	\$0	\$0	\$0	\$0	\$0	\$0	\$5,382,591	\$5,382,591
236220	\$1,028,566	\$0	\$0	\$0	\$0	\$1,028,566	\$79,840,056	\$80,868,622
237110	\$0	\$3,611,082	\$2,380,000	\$0	\$2,266,706	\$8,257,788	\$75,333,684	\$83,591,472
237130	\$0	\$0	\$0	\$0	\$0	\$0	\$4,576,479	\$4,576,479
237310	\$2,294,741	\$23,321,388	\$1,135,460	\$74,041	\$8,705,568	\$35,531,198	\$489,651,128	\$525,182,326
237990	\$0	\$3,183,987	\$0	\$0	\$1,803,349	\$4,987,336	\$17,017,372	\$22,004,708
238110	\$49,866	\$606,847	\$60,940	\$0	\$445,822	\$1,163,475	\$50,520,864	\$51,684,339
238120	\$54,040	\$373,697	\$817,264	\$0	\$1,258,828	\$2,503,829	\$4,625,345	\$7,129,174
238140	\$0	\$0	\$0	\$0	\$694,709	\$694,709	\$2,580,413	\$3,275,122
238150	\$0	\$134,910	\$0	\$0	\$0	\$134,910	\$1,692,012	\$1,826,922
238160	\$0	\$3,200	\$0	\$0	\$275,000	\$278,200	\$5,536,711	\$5,814,911
238210	\$16,048	\$6,993,174	\$49,923	\$0	\$7,424,369	\$14,483,514	\$50,749,299	\$65,232,813
238220	\$0	\$0	\$0	\$0	\$420,373	\$420,373	\$24,317,566	\$24,737,939
238290	\$0	\$42,143	\$0	\$0	\$1,991,473	\$2,033,616	\$3,440,397	\$5,474,013
238310	\$135,175	\$7,220	\$0	\$0	\$924,923	\$1,067,319	\$9,294,037	\$10,361,356
238350	\$0	\$1,464,612	\$0	\$0	\$17,980	\$1,482,592	\$2,529,551	\$4,012,143
238390	\$0	\$0	\$0	\$0	\$53,760	\$53,760	\$3,572,084	\$3,625,844
238910	\$40,789	\$505,803	\$31,164	\$0	\$4,340,417	\$4,918,173	\$31,732,234	\$36,650,407
238990	\$0	\$7,412,304	\$1,559	\$0	\$3,137,670	\$10,551,533	\$19,535,792	\$30,087,324
327320	\$0	\$0	\$0	\$0	\$26,695	\$26,695	\$5,395,040	\$5,421,734
327390	\$0	\$0	\$0	\$0	\$0	\$0	\$3,136,029	\$3,136,029

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
423430	\$52,915	\$259,153	\$520,425	\$0	\$582,936	\$1,415,429	\$977,412	\$2,392,841
484110	\$0	\$1,017,802	\$0	\$1,506,082	\$297,258	\$2,821,142	\$339,071	\$3,160,213
524114	\$0	\$0	\$0	\$0	\$0	\$0	\$9,287,280	\$9,287,280
541330	\$1,327,080	\$1,257,895	\$1,853,519	\$0	\$28,776	\$4,467,270	\$16,588,744	\$21,056,014
541512	\$0	\$0	\$0	\$0	\$0	\$0	\$911,084	\$911,084
561730	\$0	\$48,980	\$0	\$23,924	\$352,569	\$425,473	\$3,694,782	\$4,120,254
561990	\$85,290	\$82,725	\$23,891	\$0	\$228,661	\$420,567	\$3,334,523	\$3,755,091
562111	\$0	\$0	\$0	\$0	\$2,179	\$2,179	\$60,998,053	\$61,000,232
Total	\$5,084,510	\$50,326,921	\$6,874,144	\$1,604,047	\$35,280,023	\$99,169,645	\$986,589,633	\$1,085,759,278

Source: CHA analysis of Harris County data.

**Table 3-7: Distribution of the County’s Contract Dollars by Race and Gender
(share of total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
236220	1.3%	0.0%	0.0%	0.0%	0.0%	1.3%	98.7%	100.0%
237110	0.0%	4.3%	2.8%	0.0%	2.7%	9.9%	90.1%	100.0%
237130	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
237310	0.4%	4.4%	0.2%	0.0%	1.7%	6.8%	93.2%	100.0%
237990	0.0%	14.5%	0.0%	0.0%	8.2%	22.7%	77.3%	100.0%
238110	0.1%	1.2%	0.1%	0.0%	0.9%	2.3%	97.7%	100.0%
238120	0.8%	5.2%	11.5%	0.0%	17.7%	35.1%	64.9%	100.0%
238140	0.0%	0.0%	0.0%	0.0%	21.2%	21.2%	78.8%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
238150	0.0%	7.4%	0.0%	0.0%	0.0%	7.4%	92.6%	100.0%
238160	0.0%	0.1%	0.0%	0.0%	4.7%	4.8%	95.2%	100.0%
238210	0.0%	10.7%	0.1%	0.0%	11.4%	22.2%	77.8%	100.0%
238220	0.0%	0.0%	0.0%	0.0%	1.7%	1.7%	98.3%	100.0%
238290	0.0%	0.8%	0.0%	0.0%	36.4%	37.2%	62.8%	100.0%
238310	1.3%	0.1%	0.0%	0.0%	8.9%	10.3%	89.7%	100.0%
238350	0.0%	36.5%	0.0%	0.0%	0.4%	37.0%	63.0%	100.0%
238390	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%	98.5%	100.0%
238910	0.1%	1.4%	0.1%	0.0%	11.8%	13.4%	86.6%	100.0%
238990	0.0%	24.6%	0.0%	0.0%	10.4%	35.1%	64.9%	100.0%
327320	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	99.5%	100.0%
327390	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423430	2.2%	10.8%	21.7%	0.0%	24.4%	59.2%	40.8%	100.0%
484110	0.0%	32.2%	0.0%	47.7%	9.4%	89.3%	10.7%	100.0%
524114	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541330	6.3%	6.0%	8.8%	0.0%	0.1%	21.2%	78.8%	100.0%
541512	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561730	0.0%	1.2%	0.0%	0.6%	8.6%	10.3%	89.7%	100.0%
561990	2.3%	2.2%	0.6%	0.0%	6.1%	11.2%	88.8%	100.0%
562111	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	0.5%	4.6%	0.6%	0.1%	3.2%	9.1%	90.9%	100.0%

Source: CHA analysis of Harris County data.

4. Availability of M/WBEs in the County’s Constrained Product Market

a. Methodological Framework

Estimates of the availability of M/WBEs in the County’s market area are a critical component of the analysis of possible barriers to equal opportunities to participate in the agency’s contracting activities. These availability estimates are compared to the utilization percentage of dollars received by M/WBEs to examine whether minority- and women-owned firms receive

parity.¹²⁹ Availability estimates are also crucial for the County to set narrowly tailored annual and contract goals on its contracts covered by its M/WBE program.

We generally applied the “custom census” approach with refinements to estimating availability. The courts and the National Model Disparity Study Guidelines¹³⁰ have recognized this methodology as superior to the other methods for at least four reasons:

- First, it provides an internally consistent and rigorous “apples to apples” comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (*e.g.*, certified M/WBEs or firms that respond to a survey) and the denominator (*e.g.*, registered vendors or the Census Bureau’s County Business Patterns data).
- Second, by examining a comprehensive group of firms, it “casts a broader net” beyond those businesses already known to the agency. As recognized by the courts, this comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. Our methodology is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders’ lists, because it seeks out firms in the County’s market area that have not accessed the agency’s opportunities but provide the types of services and goods purchased by the County.
- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Most courts have held that the results of discrimination—which impact factors affecting capacity—should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority and women firms may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these “capacity” factors are the outcomes of

129. For our analysis, the term “M/WBE” includes firms that are certified by government agencies and minority- and women-owned firms that are not certified. As discussed in Chapter II, the inclusion of all minority- and female-owned businesses in the pool casts the broad net approved by the courts and recommended by the USDOT that supports the remedial nature of the programs. See *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007) (“*Northern Contracting III*”) (The “remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net.”). https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf.

130. *National Disparity Study Guidelines*, pp.57-58.

discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.¹³¹

- Fourth, it has been upheld by every court that has reviewed it, including most recently in the successful defense of the Illinois State Toll Highway’s DBE program, for which we served as testifying experts.¹³²

Using this framework, CHA utilized three databases to estimate availability:

- The Final Contract Data File, which contains the County’s contract data;
- The Master M/WBE Directory compiled by CHA; and
- The Dun & Bradstreet/Hoovers Database downloaded from the company’s website.

The Master M/WBE Directory combined the results of an exhaustive search for directories and other lists containing information about minority- and women-owned businesses. The resulting list of minority and women businesses is comprehensive. After compiling the Master M/WBE Directory, we limited the firms we used in our analysis to those operating within the County’s constrained product market.

We next developed a custom database from Hoovers, a Dun & Bradstreet company. Hoovers maintains a comprehensive, extensive and regularly updated listing of all firms conducting business. The database includes a vast amount of information on each firm, including location and detailed industry codes, and is the broadest publicly available data source for firm information. We purchased the information from Hoovers for the firms in the NAICS codes located in the County’s market area in order to form our custom Dun & Bradstreet/Hoovers Database. In the initial download, the data from Hoovers simply identifies a firm as being minority-owned.¹³³ However, the company does keep detailed information on ethnicity (*i.e.*, whether the minority firm owner is Black, Hispanic, Asian, or Native American). We obtained this additional information from Hoovers by special request.

131. For a detailed discussion of the role of capacity in disparity studies, see *National Disparity Study Guidelines*, Appendix B, “Understanding Capacity.”

132. *Midwest Fence Corp. v. US Department of Transportation, Illinois Department of Transportation, Illinois State Toll Highway Authority*, 840 F.3d 932 (7th Cir. 2016) (“*Midwest Fence II*”); see also *Northern Contracting III*, 473 F.3d at 715.

133. The variable is labeled: “Is Minority Owned” and values for the variable can be either “yes” or “no”.

We merged these three databases to form an accurate estimate of firm availability to the agency. Tables 3-8 through 3-14 present data on:

- The unweighted availability by race and gender and by NAICS codes for contracts in the County’s constrained product market;
- The weights used to adjust the unweighted numbers¹³⁴;
- The final estimates of the weighted averages of the individual 6-digit level availability estimates in the County’s market area. These weighted availability estimates can be used by the agency to set its M/WBE annual goals;
- And the disparity ratios by demographic group.

Table 3-8: Unweighted Availability for the County’s Contracts

NAICS	Black	Latino	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	7.7%	0.0%	0.0%	0.0%	7.7%	92.3%	100.0%
236220	10.7%	6.4%	4.0%	0.5%	7.1%	28.7%	71.3%	100.0%
237110	5.0%	8.7%	1.3%	0.2%	6.4%	21.7%	78.3%	100.0%
237130	8.0%	17.7%	3.5%	0.0%	11.5%	40.7%	59.3%	100.0%
237310	10.1%	14.0%	4.2%	0.7%	6.2%	35.2%	64.8%	100.0%
237990	2.1%	4.5%	0.3%	0.0%	6.0%	13.0%	87.0%	100.0%
238110	5.0%	9.7%	1.4%	0.0%	3.6%	19.7%	80.3%	100.0%
238120	5.8%	22.0%	6.4%	0.0%	14.5%	48.6%	51.4%	100.0%
238140	1.4%	5.2%	0.7%	0.0%	4.5%	11.8%	88.2%	100.0%
238150	0.5%	7.7%	1.1%	1.6%	3.8%	14.8%	85.2%	100.0%
238160	1.9%	3.7%	0.2%	0.0%	3.1%	8.9%	91.1%	100.0%
238210	2.6%	4.7%	1.0%	0.1%	4.4%	12.8%	87.2%	100.0%
238220	1.8%	1.9%	0.2%	0.0%	2.9%	6.8%	93.2%	100.0%
238290	5.0%	4.0%	2.0%	0.0%	12.9%	23.8%	76.2%	100.0%
238310	6.8%	7.5%	0.9%	0.2%	4.4%	19.7%	80.3%	100.0%
238350	3.0%	8.3%	1.9%	0.0%	3.4%	16.7%	83.3%	100.0%
238390	2.2%	3.3%	0.4%	0.0%	4.1%	10.0%	90.0%	100.0%

134. These weights are equivalent to the share of contract dollars presented in Section 3, The County’s Utilization of M/WBEs on County Contracts.

NAICS	Black	Latino	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
238910	10.6%	13.2%	1.3%	0.2%	9.5%	34.8%	65.2%	100.0%
238990	2.3%	2.4%	0.5%	0.1%	4.5%	9.8%	90.2%	100.0%
327320	1.4%	1.4%	2.1%	0.0%	2.1%	6.9%	93.1%	100.0%
327390	0.0%	1.1%	0.0%	1.1%	4.3%	6.5%	93.5%	100.0%
423430	4.2%	2.3%	5.7%	0.3%	10.5%	22.9%	77.1%	100.0%
484110	1.7%	1.3%	0.1%	0.1%	2.1%	5.3%	94.7%	100.0%
524114	0.0%	0.9%	0.0%	0.0%	3.7%	4.6%	95.4%	100.0%
541330	3.9%	4.7%	5.3%	0.4%	5.1%	19.4%	80.6%	100.0%
541512	5.2%	2.0%	4.9%	0.2%	6.5%	18.8%	81.2%	100.0%
561730	3.0%	2.3%	0.1%	0.1%	4.4%	9.9%	90.1%	100.0%
561990	1.6%	0.5%	0.2%	0.0%	2.1%	4.4%	95.6%	100.0%
562111	19.3%	14.0%	3.5%	0.0%	5.3%	42.1%	57.9%	100.0%
Total	2.7%	2.4%	1.0%	0.1%	3.4%	9.6%	90.4%	100.0%

Source: CHA analysis of Harris County data; Hoovers; CHA Master Directory.

Table 3-9: Share of the County Spending by NAICS Code

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
212312	Crushed and Broken Limestone Mining and Quarrying	0.5%
236220	Commercial and Institutional Building Construction	7.4%
237110	Water and Sewer Line and Related Structures Construction	7.7%
237130	Power and Communication Line and Related Structures Construction	0.4%
237310	Highway, Street, and Bridge Construction	48.4%
237990	Other Heavy and Civil Engineering Construction	2.0%
238110	Poured Concrete Foundation and Structure Contractors	4.8%
238120	Structural Steel and Precast Concrete Contractors	0.7%
238140	Masonry Contractors	0.3%
238150	Glass and Glazing Contractors	0.2%
238160	Roofing Contractors	0.5%
238210	Electrical Contractors and Other Wiring Installation Contractors	6.0%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
238220	Plumbing, Heating, and Air-Conditioning Contractors	2.3%
238290	Other Building Equipment Contractors	0.5%
238310	Drywall and Insulation Contractors	1.0%
238350	Finish Carpentry Contractors	0.4%
238390	Other Building Finishing Contractors	0.3%
238910	Site Preparation Contractors	3.4%
238990	All Other Specialty Trade Contractors	2.8%
327320	Ready-Mix Concrete Manufacturing	0.5%
327390	Other Concrete Product Manufacturing	0.3%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.2%
484110	General Freight Trucking, Local	0.3%
524114	Direct Health and Medical Insurance Carriers	0.9%
541330	Engineering Services	1.9%
541512	Computer Systems Design Services	0.1%
561730	Landscaping Services	0.4%
561990	All Other Support Services	0.3%
562111	Solid Waste Collection	5.6%
Total		100.0%

Source: CHA analysis of Harris County data.

Table 3-10: Aggregated Weighted Availability

Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
8.4%	10.7%	3.0%	0.4%	5.9%	28.4%	71.6%	100.0%

Source: CHA analysis of Harris County data; Hoovers; CHA Master Directory.

C. Disparity Analysis of MWBEs for Harris County Contracts

As discussed in depth in Chapter I, strict constitutional scrutiny requires that a local government must establish that discrimination operates in its market area,

through consideration of evidence of disparities, among other evidence. To examine the County’s compelling interest in remedying discrimination in its market area, we next calculated disparity ratios for total MWBE utilization compared to the total weighted availability of MWBEs, measured in dollars paid.

A “large” or “substantively significant” disparity is commonly defined by courts as utilization that is equal to or less than 80 percent of the availability measure. A substantively significant disparity supports the inference that the result may be caused by the disparate impacts of discrimination.¹³⁵ A statistically significant disparity means that an outcome is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. A more in-depth discussion of statistical significance is provided in Appendix C.

A *disparity ratio* is the relationship between the utilization and weighted availability, determined above. Mathematically, this is represented by:

$$DR = U/WA$$

Where DR is the disparity ratio; U is utilization rate; and WA is the weighted availability.

Table 3-11 presents the calculated disparity ratios for each demographic group.

Table 3-11: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	6.0%‡	43.0%‡*	19.8%‡	22.8%‡	54.1%‡	32.0%‡***	126.8%***

Source: CHA analysis of Harris County data; Hoovers; CHA Master Directory.

‡ Indicates substantive significance.

***Indicates statistical significance at the 0.001 level.¹³⁶

135. See U.S. Equal Opportunity Employment Commission regulation, 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”).

136. Appendix C discusses the meaning and role of statistical significance.

IV. ANALYSIS OF ECONOMY-WIDE DISPARITIES IN HARRIS COUNTY'S MARKETS

A. Introduction

The late Nobel Prize Laureate Kenneth Arrow, in his seminal paper on the economic analysis of discrimination, observed:

Racial discrimination pervades every aspect of a society in which it is found. It is found above all in attitudes of both races, but also in social relations, in intermarriage, in residential location, and frequently in legal barriers. It is also found in levels of economic accomplishment; this is income, wages, prices paid, and credit extended.¹³⁷

This Chapter explores the data and literature relevant to how discrimination in Harris County's ("the County") market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in the County's contract opportunities. First, we analyzed the rates at which M/WBEs in the Houston metropolitan area¹³⁸ form firms and their earnings from those firms. Next, we looked at the number of sales and receipts, number of employees and payroll for M/WBE firms in the State of Texas. Then, we summarized the literature on barriers to equal access to commercial credit. Finally, we summarized the literature on barriers to equal access to human capital. All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in discrimination without some type of affirmative interventions.

A key element to determine the need for government intervention through contract goals in the sectors of the economy where it procures goods and services is an analysis of the extent of disparities in those sectors, independent of the agency's intervention through its contracting affirmative action programs.

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs show that their earnings from such businesses, and their access to capital

137. Arrow, Kenneth J., "What Has Economics to say about racial discrimination?" *Journal of Economic Perspectives*, (1998), 12(2), pp. 91-100.

138. For the purposes of this study, we defined the Houston metropolitan area as: Harris, Fort Bend, Montgomery, Brazoria, and Galveston Counties.

markets, are highly relevant to the determination of whether the market functions properly for all firms, regardless of the race or gender of their ownership.¹³⁹ These analyses contributed most recently to the successful defense of the Illinois Tollway's Disadvantaged Business Enterprise (DBE) Program.¹⁴⁰ As explained by the Tenth Circuit in upholding the U.S. Department of Transportation's DBE program,

this type of evidence demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.¹⁴¹

Business discrimination studies and lending studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination.

"Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts."¹⁴²

139. See the discussion in Chapter II of the legal standards applicable to contracting affirmative action programs.

140. *Midwest Fence Corp. v. US Department of Transportation, Illinois Department of Transportation, Illinois State Toll Highway Authority*, 840 F.3d 932, 934 (7th Cir. 2016) ("*Midwest Fence II*") (upholding the Illinois Tollway's program for state funded contracts modeled after Part 26 and based on CHA's expert testimony, including about disparities in the overall Illinois construction industry); see also *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003) (holding that the City of Chicago's M/WBE program for local construction contracts met the compelling interest prong using this framework).

141. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1169 (10th Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001) ("*Adarand VII*").

142. *Id.*

Despite the contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education”, “culture” and “religion”.

For example, in unanimously upholding the USDOT DBE program, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.¹⁴³ The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.¹⁴⁴

Likewise, in holding that the DBE program regulations meet strict scrutiny, the court in the *Western States* opinion relied on the “substantial body of statistical and anecdotal materials” considered by Congress, including studies based on Census data that provide “ample” evidence of barriers to the formation of minority-owned firms in the transportation contracting industry.¹⁴⁵

To explore the question whether firms owned by Non-Whites and White Women face disparate treatment in the County’s marketplace outside of County contracts, we examined the U.S. Bureau of the Census’ *American Community Survey* which allows us to examine disparities using individual entrepreneurs as the basic unit of

143. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at *64 (Sept. 8, 2005) (“*Northern Contracting II*”).

144. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964, 970 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *see also Adarand VII*, 228 F.3d at 1175 (plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

145. *Western States Paving Co., Inc. v. Department of Transportation*, 407 F.3d 983, 993 (9th Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

analysis.¹⁴⁶ We used the five-county Houston metropolitan area as the geographic unit of analysis.

We found disparities in wages, business earnings and business formation rates for minorities and women in all industry sectors in the County's marketplace.

B. Disparate Treatment in the Marketplace: Evidence from the Census Bureau's 2013 - 2017 American Community Survey

As discussed in the beginning of this Chapter, the key question is whether firms owned by Non-Whites and White Women face disparate treatment in the marketplace without the intervention of County programs. In this section, we explore this and other aspects of this question using the Census Bureau's *American Community Survey* data. One element asks if demographic differences exist in the wage and salary income received by private sector workers. Beyond the issue of bias in the incomes generated in the private sector, this exploration is important for the issue of possible variations in the rate of business formation by different demographic groups. One of the determinants of business formation is the pool of financial capital at the disposal of the prospective entrepreneur. The size of this pool is related to the income level of the individual either because the income level impacts the amount of personal savings that can be used for start-up capital or the income level affects one's ability to borrow funds. Consequently, if particular demographic groups receive lower wages and salaries, then they would have access to a smaller pool of financial capital, and thus reduce the likelihood of business formation.

The *American Community Survey* ("ACS") *Public Use Microdata Sample* ("PUMS") is useful in addressing these issues. The ACS is an annual survey of one percent of the population and the PUMS provides detailed information at the individual level. In order to obtain robust results from our analysis, we used the file that combines the most recent data available for the years 2013 through 2017.¹⁴⁷ With this rich data set, our analysis can establish with greater certainty any causal links between race, gender and economic outcomes.

Often, the general public sees clear associations between race, gender, and economic outcomes and assumes this association reflects a tight causal connection. However, economic outcomes are determined by a broad set of factors, including and extending beyond, race and gender. To provide a simple example, two people who differ by race or gender may receive different wages. This difference may simply reflect that the individuals work in different industries. If this underlying differ-

146. Data from 2013 - 2017 American Community Survey are the most recent for a five-year period.

147. For more information about the ACS PUMS, see <http://www.census.gov/acs/>.

ence is not known, one might assert the wage differential is the result of race or gender difference. To better understand the impact of race or gender on wages, it is important to compare individuals of different races or genders who work in the same industry. Of course, wages are determined by a broad set of factors beyond race, gender, and industry. With the ACS PUMS, we have the ability to include a wide range of additional variables such as age, education, occupation, and state of residence in the analysis.

We employ a multiple regression statistical technique to process this data. This methodology allows us to obtain two results: an estimation of how variations in certain characteristics (called independent variables) will impact the level of some particular outcome (called a dependent variable), and a determination of how confident we are that the estimated variation is statistically different from zero. We have provided more detail on this technique in Appendix A.

With respect to the first step of the regression analysis, we will examine how variations in the race, gender, and industry of individuals impact the wages and other economic outcomes received by individuals. The technique allows us to determine the effect of changes in one variable, assuming that the other determining variables are the same. That is, we compare individuals of different races, but of the same gender and in the same industry; or we compare individuals of different genders, but of the same race and the same industry; or we compare individuals in different industries, but of the same race and gender. We are determining the impact of changes in one variable (*e.g.*, race, gender or industry) on another variable (wages), “controlling for” the movement of any other independent variables.

With respect to the second step of the regression analysis, we will determine the statistical significance of the relationship between the dependent variable and independent variable. For example, the relationship between gender and wages might exist, but we find that it is not statistically different from zero. In this case, we are not confident that there is any relationship between the two variables. If the relationship is not statistically different from zero, then a variation in the independent variable has no impact on the dependent variable. The regression analysis allows us to say with varying degrees of statistical confidence that a relationship is different from zero. If the estimated relationship is statistically significant at the 0.05 level, that indicates we are 95 percent confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.01 level, that indicates we are 99 percent confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.001 level, that indicates we are 99.9 percent confident that the relationship is different from zero.¹⁴⁸

148. Most social scientists do not endorse utilizing a confidence level of less than 95 percent. Appendix C explains more about statistical significance.

In the following presentation of results, each sub-section first reports data on the share of a demographic group that forms a business (business formation rates); the probabilities that a demographic group will form a business relative to White men (business formation probabilities); the differences in wages received by a demographic group relative to White men (wage differentials); and the differences in business earnings received by a demographic group relative to White men (business earnings differentials).

1. All Industries Combined in the Houston Metropolitan Area

One method of exploring differences in economic outcomes is to examine the rate at which different demographic groups form businesses. We developed these business formation rates using data from the U.S. Bureau of the Census' *American Community Survey*. Table 4-1 presents these results. The table indicates that White men have higher business formation rates compared to Non-Whites and White Women except for Asian/Pacific Islanders. Table 4-2 utilizes probit regression analysis to examine the probability of forming a business after controlling for important factors beyond race and gender.¹⁴⁹ This table indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 1.8 percent for Blacks to 0.9 percent for White Women. These results were statistically significant at the 0.001 level. Another way to measure equity is to examine how the wage and salary incomes and business earnings of particular demographic groups compare to White men. Multiple regression statistical techniques allowed us to examine the impact of race and gender on economic outcomes while controlling for other factors, such as education and age.¹⁵⁰ Tables 4-3 and 4-4 present this data on wage and salary incomes and business earnings respectively. Table 4-3 indicates that Non-whites and White women earn less than White men. The reduction in earnings ranges from 40.1 percent to 25.1 percent and all of the results are statistically significant at the 0.001 level. Table 4-4 indicates that Non-whites and White women receive business earnings less than White men. The reduction in earnings ranges from 53.1 percent to 33.5 percent.

149. Appendix B provides a "Further Explanation of Probit Regression Analysis."

150. See Appendix A for more information on multiple regression statistical analysis.

Table 4-1: Business Formation Rates
All Industries, 2013 - 2017¹⁵¹

Demographic Group	Business Formation Rates
Black	2.1%
Hispanic	2.0%
Native American	1.3%
Asian/Pacific Islander	5.6%
Other	2.6%
White Women	2.9%
Non-White Male	2.6%
White Male	4.9%

Source: CHA calculations from the American Community Survey.

Table 4-2: Business Formation Probabilities Relative to White Males
All Industries, 2013 - 2017

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-1.8%***
Hispanic	-1.4%***
Native American	(omitted) ^a
Asian/Pacific Islander	1.0%***
Other	(omitted)
White Women	-0.9%***

151. Statistical significance tests were not conducted on basic business formation rates.

a. The value “(omitted)” indicates the regression analysis returned a value of “omitted”. In general, this result stems from the inability to estimate a coefficient for the variable in question because collinearity – indicating the variable perfectly aligns with another variable – or because of a limited sample size. In this case, there were only six firms identified as Other and three firms identified as Native Americans. Therefore, through this section, the coefficients for Other and Native American are omitted and the value “(omitted)” will appear in all of the corresponding business earnings tables. We could not analyze the business activity for Native Americans and Others due to the limited number of observations. This limitation does not apply to the analysis of wage differentials because this analysis is based on individuals who receive salary and wage income which is a larger number than the individuals who own businesses.

Source: CHA calculations from the American Community Survey.
 *** Indicates statistical significance at the 0.001 level.

**Table 4-3: Wage Differentials for Selected Groups Relative to White Men
 All Industries, 2013 - 2017**

Demographic Group	Wages Relative to White Men (% Change)
Black	-40.1%***
Hispanic	-25.1%***
Native American	-25.9%***
Asian/Pacific Islander	-38.7%***
Other	-32.6%***
White Women	-35.5%***

Source: CHA calculations from the American Community Survey.
 *** Indicates statistical significance at the 0.001 level.

Table 4-4: Business Earnings Differentials for Selected Groups Relative to White Men
All Industries

Demographic Group	Earnings Relative to White Men (% Change)
Black	-51.9%*
Hispanic	-53.1%**
Native American	(omitted)
Asian/Pacific Islander	-33.5%
Other	(omitted)
White Women	-48.9%

Source: CHA calculations from the American Community Survey.

** Indicates statistical significance at the 0.01 level.

* Indicates statistical significance at the 0.05 level.

2. The Construction Industry in the Houston Metropolitan Area

Table 4-5 indicates that White men have higher business formation rates compared to Non-Whites (except for Asian/Pacific Islanders) and White Women. Table 4-6 indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 3.9 percent to 1.2 percent. Table 4-7 indicates that Non-whites and White women earn less than White men. The statistically significant reductions in earnings range from 43.7 percent to 15.9 percent. Table 4-8 indicates that none of the business earnings coefficients were statistically significant.¹⁵²

Table 4-5: Business Formation Rates,
Construction, 2013 - 2017

Demographic Group	Business Formation Rates
Black	1.9%
Hispanic	2.5%
Native American	0.0%
Asian/Pacific Islander	9.2%
Other	0.0%

152. Please see Appendix C, Significance Levels, for an explanation of how significance is determined.

Demographic Group	Business Formation Rates
White Women	4.5%
Non-White Male	2.8%
White Male	8.8%

Source: CHA calculations from the American Community Survey.

Table 4-6: Business Formation Probability Differentials for Selected Groups Relative to White Men, Construction, 2013 - 2017

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.9% ^{**}
Hispanic	-2.1% ^{***}
Native American	(omitted)
Asian/Pacific Islander	0.2%
Other	(omitted)
White Women	-1.2%

Source: CHA calculations from the American Community Survey.

^{***} Indicates statistical significance at the 0.001 level,

^{**} Indicates statistical significance at the 0.01 level.

Table 4-7: Wage Differentials for Selected Groups Relative to White Men Construction, 2013 - 2017

Demographic Group	Wages Relative to White Men (% Change)
Black	-40.9% ^{***}
Hispanic	-25.8% ^{***}
Native American	-26.8%
Asian/Pacific Islander	-15.9% [*]
Other	-43.7%
White Women	-38.3% ^{***}

Source: CHA calculations from the American Community Survey.

^{***} Indicates statistical significance at the 0.001 level.

^{*} Indicates statistical significance at the 0.05 level

**Table 4-8: Business Earnings Differentials for Selected Groups Relative to White Men
Construction, 2013 - 2017**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-38.3%
Hispanic	-186.0%
Native American	(omitted)
Asian/Pacific Islander	-224.0%
Other	(omitted)
White Women	-203.0%

Source: CHA calculations from the American Community Survey.

3. The Construction-Related Services Industry in the Houston Metropolitan Area

Table 4-9 indicates that White men have higher business formation rates compared to Non-Whites and White Women.¹⁵³ Table 4-10 indicates that none of the coefficients for business earnings were statistically significant. Table 4-11 indicates that Non-whites (except for Native Americans) and White women earn less than White men. Table 4-12 indicates that none of the coefficients for business earnings were statistically significant.

153. There was only one firm in this industry that was identified as Other-owned, so this result can be discounted.

**Table 4-9: Business Formation Rates
Construction-Related Services, 2013 - 2017**

Demographic Group	Business Formation Rates
Black	3.9%
Hispanic	2.9%
Native American	0.0%
Asian/Pacific Islander	2.3%
Other	11.9%
White Women	2.1%
Non-White Male	2.8%
White Male	4.0%

Source: CHA calculations from the American Community Survey.

**Table 4-10: Business Formation Probability Differentials for Selected Groups
Relative to White Men, Construction-related Services, 2013 - 2017**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	2.1%
Hispanic	0.5%
Native American	(omitted)
Asian/Pacific Islander	-2.4%
Other	(omitted)
White Women	-0.1%

Source: CHA calculations from the American Community Survey.

**Table 4-11: Wage Differentials for Selected Groups Relative to White Men
Construction-Related Services, 2013 - 2017**

Demographic Group	Wages Relative to White Men (% Change)
Black	-31.4%***
Hispanic	-27.5%***
Native American	-3.9%

Demographic Group	Wages Relative to White Men (% Change)
Asian/Pacific Islander	-17.8%***
Other	-35.3%
White Women	-36.8%***

Source: CHA calculations from the American Community Survey.
 *** Indicates statistical significance at the 0.001 level.

Table 4-12: Business Earnings Differentials for Selected Groups Relative to White Men

Construction-related Services, 2013 - 2017

Demographic Group	Earnings Relative to White Men (% Change)
Black	-398.0%
Hispanic	-264.0%
Native American	(omitted)
Asian/Pacific Islander	-290.0%
Other	(omitted)
White Women	-47.1%

Source: CHA calculations from the American Community Survey.

4. The Goods Industry in Houston Metropolitan Area

Table 4-13 indicates that White men have higher business formation rates except Asian/Pacific Islanders.¹⁵⁴ Table 4-14 indicates that only one result is statistically significant (Asian/Pacific Islander). Table 4-15 indicates that statistically significant results are found for all groups except for Native American and those indicate lower wages relative to White men. Table 4-16 indicates that none of the coefficients for business earnings were statistically significant.

154. There was only one firm in this industry that was identified as Native American-owned, so this result can be discounted.

**Table 4-13: Table 4-13 Business Formation Rates
Goods, 2013 - 2017**

Demographic Group	Business Formation Rates
Black	1.9%
Hispanic	1.7%
Native American	13.2%
Asian/Pacific Islander	9.1%
Other	0.0%
White Women	2.0%
Non-White Male	2.6%
White Male	3.8%

Source: CHA calculations from the American Community Survey.

**Table 4-14: Business Formation Probabilities Relative to White Males
Goods, 2013 - 2017**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-1.0%
Hispanic	0.3%
Native American	(omitted)
Asian/Pacific Islander	3.2%***
Other	(omitted)
White Women	-1.0%

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

**Table 4-15: Wage Differentials for Selected Groups Relative to White Men
Goods, 2013 - 2017**

Demographic Group	Wages Relative to White Men (% Change)
Black	-39.1%***
Hispanic	-22.9%***
Native American	18.5%

Demographic Group	Wages Relative to White Men (% Change)
Asian/Pacific Islander	-47.7%***
Other	-47.9%*
White Women	-36.8%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

* Indicates statistical significance at the 0.05 level.

Table 4-16: Business Earnings Differentials for Selected Groups Relative to White Men

Goods, 2013 - 2017

Demographic Group	Earnings Relative to White Men (% Change)
Black	-92.5%
Hispanic	-114.0%
Native American	(omitted)
Asian/Pacific Islander	-117.0%
Other	(omitted)
White Women	-179.0%

Source: CHA calculations from the American Community Survey.

5. The Services Industry in Houston Metropolitan Area

Table 4-17 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 4-18 indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men and three of the coefficients are statistically significant. Table 4-19 indicates that Non-whites and White women earn less than White men. Table 4-20 indicates that none of the coefficients for business earnings were statistically significant.

**Table 4-17: Business Formation Rates
Services, 2013 - 2017**

Demographic Group	Business Formation Rates
Black	2.8%
Hispanic	2.3%
Native American	0.7%
Asian/Pacific Islander	6.3%
Other	2.0%
White Women	3.9%
Non-White Male	3.2%
White Male	7.3%

Source: CHA calculations from the American Community Survey.

**Table 4-18: Business Formation Probability Differentials for Selected Groups
Relative to White Men, Services, 2013 - 2017**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-2.3% ^{***}
Hispanic	-1.8% ^{***}
Native American	(omitted)
Asian/Pacific Islander	0.1%
Other	(omitted)
White Women	-1.5% ^{***}

Source: CHA calculations from the American Community Survey.

^{***} Indicates statistical significance at the 0.001 level.

**Table 4-19: Wage Differentials for Selected Groups Relative to White Men
Services, 2013 - 2017**

Demographic Group	Wages Relative to White Men (% Change)
Black	-38.4% ^{***}
Hispanic	-23.3% ^{***}
Native American	-34.6% ^{**}

Demographic Group	Wages Relative to White Men (% Change)
Asian/Pacific Islander	-34.1%***
Other	-35.8%***
White Women	-32.8%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

Table 4-20: Business Earnings Differentials for Selected Groups Relative to White Men

Services, 2013 - 2017

Demographic Group	Earnings Relative to White Men (% Change)
Black	0.01%
Hispanic	-42.3%
Native American	(omitted)
Asian/Pacific Islander	-17.0%
Other	(omitted)
White Women	-34.6%

Source: CHA calculations from the American Community Survey.

6. The Information Technology Industry in the Houston Metropolitan Area

Table 4-21 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 4-22 indicates that none of the coefficients were statistically significant. Table 4-23 indicates that Non-whites and White women earn less than White men and all coefficients are statistically significant except for the coefficients for Native Americans and Other. Table 4-24 indicates that none of the coefficients for business earnings were statistically significant.

**Table 4-21: Business Formation Rates
Information Technology, 2013 - 2017**

Demographic Group	Business Formation Rates
Black	4.9%
Hispanic	3.4%
Native American	0.0%
Asian/Pacific Islander	4.4%
Other	0.0%
White Women	1.8%
Non-White Male	3.7%
White Male	6.7%

Source: CHA calculations from the American Community Survey.

**Table 4-22: Business Formation Probability Differentials for Selected Groups
Relative to White Men, Information Technology, 2013 - 2017**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-4.3%
Hispanic	0.7%
Native American	(omitted)
Asian/Pacific Islander	-0.7%
Other	(omitted)
White Women	-0.6%

Source: CHA calculations from the American Community Survey.

**Table 4-23: Wage Differentials for Selected Groups Relative to White Men
Information Technology, 2013 - 2017**

Demographic Group	Wages Relative to White Men (% Change)
Black	-14.8%**
Hispanic	-17.6%***
Native American	-18.1%

Demographic Group	Wages Relative to White Men (% Change)
Asian/Pacific Islander	-15.8%**
Other	-1.6%
White Women	-18.9%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

Table 4-24: Business Earnings Differentials for Selected Groups Relative to White Men

Information Technology, 2013 - 2017

Demographic Group	Earnings Relative to White Men (% Change)
Black	22.8%
Hispanic	-1310.0%
Native American	(omitted)
Asian/Pacific Islander	-186.0%
Other	(omitted)
White Women	182.0%

Source: CHA calculations from the American Community Survey.

C. Disparate Treatment in the Marketplace: Evidence from the Census Bureau's 2012 Survey of Business Owners

Every five years, the Census Bureau administers the *Survey of Business Owners* ("SBO") to collect data on particular characteristics of businesses that report to the Internal Revenue Service receipts of \$1,000 or more.¹⁵⁵ The 2012 SBO was released on December 15, 2015, so our analysis reflects the most current data available. The SBO collects demographic data on business owners disaggregated into the following groups:^{156,157}

155. See <http://www.census.gov/econ/sbo/about.html> for more information on the Survey.

156. Race and gender labels reflect the categories used by the Census Bureau.

157. For expository purposes, the adjective "Non-Hispanic" will not be used in this chapter; the reader should assume that any racial group referenced does not include members of that group who identify ethnically as Latino.

- Non-Hispanic Blacks
- Hispanics
- Non-Hispanic Native Americans
- Non-Hispanic Asians
- Non-Hispanic White Women
- Non-Hispanic White Men
- Firms Equally Owned by Non-Whites and Whites
- Firms Equally Owned by Men and Women
- Firms where the ownership could not be classified
- Publicly-Owned Firms

For purposes of this analysis, the first four groups were aggregated to form a Non-White category. Since our interest is the treatment of Non-White-owned firms and White Women-owned firms, the last five groups were aggregated to form one category. To ensure this aggregated group is described accurately, we label this group “not Non-White/Non-White Women”. While this label is cumbersome, it is important to be clear this group includes firms whose ownership extends beyond White men, such as firms that are not classifiable or that are publicly traded and thus have no racial ownership. In addition to the ownership demographic data, the Survey also gathers information on the sales, number of paid employees, and payroll for each reporting firm.

To examine those industry sectors in which the County purchases, we analyzed economy-wide SBO data on the following sectors:

- Construction
- Professional, Scientific and Technical Services
- Goods
- Other services

However, the nature of the SBO data – a sample of all businesses, not the entire universe of all businesses – required some adjustments. In particular, we had to define the sectors at the 2-digit North American Industry Classification System (“NAICS”) code level, and therefore our sector definitions do not exactly correspond to the definitions used to analyze the County’s contract data in Chapter III, where we were able to determine sectors at the 6-digit NAICS code level. At a more detailed level, the number of firms sampled in particular demographic and sector cells may be so small that the Census Bureau does not report the informa-

tion, either to avoid disclosing data on businesses that can be identified or because the small sample size generates unreliable estimates of the universe.¹⁵⁸ We therefore report 2-digit data for purposes of this analysis.

Table 4-25 presents information on which NAICS codes were used to define each sector.

Table 4-25: 2-Digit NAICS Code Definition of Sector

SBO Sector Label	2-Digit NAICS Codes
Construction	23
Professional, Scientific, and Technical Services ^a	54
Goods	31,42, 44
Other Services	48, 52, 53, 56, 61, 62, 71, 72, 81

a. This sector includes (but is broader than just) construction-related services. It is impossible to narrow this category to construction-related services without losing the capacity to conduct race and gender specific analyses.

The remainder of Section C of this Chapter reports the findings of the SBO analysis. For each sector, we present the data describing the sector and report the disparities within that sector.

1. All Industries

For a baseline analysis, we examined all industries in the State of Texas. Table 4-26 presents data on the percentage share that each group has of the total of each of the following six business outcomes:

- The number of all firms
- The sales and receipts of all firms
- The number of firms with employees (employer firms)
- The sales and receipts of all employer firms
- The number of paid employees
- The annual payroll of employer firms

Panel A of Table 4-26 presents data for the four basic Non-White racial groups:

158. Even with these broad sector definitions, there were many cases when the Census Bureau did not report information. In these cases, the value will be entered into the table as "s"

- Black
- Latino
- Native American
- Asian

Panel B of Table 4-26 presents data for six types of firm ownership:

- Non-white
- White Women
- White Men
- Equally Non-Whites and Whites
- Equally women and men
- Firms that are publicly-owned or not classifiable

Categories in the second panel are mutually exclusive. Hence, minority firms that are equally owned by men and women are classified as ‘Non-White’. Firms that are equally owned by minorities and Whites and equally owned by men and women are classified as ‘Equally Non-White and White’.¹⁵⁹

**Table 4-26: Percentage Demographic Distribution of Sales and Payroll Data
All Industries, 2012**

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	8.89%	0.32%	2.36%	0.22%	0.85%	0.49%
Latino	29.17%	2.51%	12.69%	1.92%	5.25%	3.53%
Native American	0.64%	0.08%	0.54%	0.07%	0.17%	0.13%
Asian	6.46%	1.72%	10.35%	1.60%	3.29%	2.18%
Panel B: Distribution of All Firms						

159. Some of the figures in Panel B may not correspond to the related figures in Panel A because of discrepancies in how the SBO reports the data.

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Non-White	45.42%	4.74%	26.27%	3.90%	9.71%	6.48%
White Women	16.39%	2.56%	12.98%	2.31%	5.00%	4.08%
White Men	29.87%	19.83%	42.92%	19.27%	26.19%	25.64%
Equally Non-White & White	1.07%	0.37%	1.74%	0.33%	0.78%	0.55%
Equally Women & Men	5.71%	1.96%	9.87%	1.80%	3.40%	2.67%
Firms Not Classifiable	1.50%	70.53%	6.11%	72.38%	54.89%	60.53%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners.

Since the central issue is the possible disparate treatment of Non-White and White Women firms, Table 4-27 re-aggregates the last four groups—White men; equally Non-White and White; equally women and men; and firms not classifiable—into one group: Not Non-White/Not White Women.¹⁶⁰ We then present the shares each group has of the six indicators of firm utilization. These data were then used to calculate three disparity ratios, presented in Table 4-28:

- Ratio of sales and receipts share for all firms over the share of total number of all firms.
- Ratio of sales and receipts share for employer firms over the share of total number of employer firms.
- Ratio of annual payroll share over the share of total number of employer firms.

For example, the disparity ratio of sales and receipts share for all firms over the share of total number of all firms for Black firms is 3.62 percent (as shown in Table 4-28). This is derived by taking the Black share of sales and receipts for all firms (0.3 percent) and dividing it by the Black share of total number of all

160. Again, while a cumbersome nomenclature, it is important to remain clear that this category includes firms other than those identified as owned by White men.

firms (8.9 percent) that are presented in Table 4-27. If Black-owned firms earned a share of sales equal to their share of total firms, the disparity would have been 100 percent. An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80 percent” rule that a ratio less than 80 percent presents a *prima facie* case of discrimination.¹⁶¹ Examining table 4-28, 17 of the 18 disparity ratios for Non-White firms and White Women firms are below the 80 percent threshold.¹⁶²

**Table 4-27: Demographic Distribution of Sales and Payroll Data – Aggregated Groups
All Industries, 2012**

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	8.9%	0.3%	2.4%	0.2%	0.8%	0.5%
Latino	29.2%	2.5%	12.7%	1.9%	5.3%	3.5%
Native American	0.6%	0.1%	0.5%	0.1%	0.2%	0.1%
Asian	6.5%	1.7%	10.4%	1.6%	3.3%	2.2%
Panel B: Distribution of All Firms						
Non-White	45.4%	4.7%	26.3%	3.9%	9.7%	6.5%
White Women	16.4%	2.6%	13.0%	2.3%	5.0%	4.1%
Not Non-White/Not White Women	38.2%	92.7%	60.7%	93.8%	85.3%	89.4%
All Firms	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: CHA calculations from Survey of Business Owners.

161. 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”).

162. Because the data in the subsequent tables are presented for descriptive purposes, significance tests on these results are not conducted.

**Table 4-28: Disparity Ratios of Firm Utilization Measures
All Industries, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	3.62%	9.17%	57.98%
Latino	8.58%	15.12%	67.30%
Native American	13.14%	13.30%	76.33%
Asian	26.66%	15.40%	66.34%
Panel B: Disparity Ratios for All Firms			
Non-Whites	10.43%	14.83%	66.76%
White Women	15.63%	17.76%	81.50%
Not Non-White/Not White Women	242.88%	154.50%	104.87%

Source: CHA calculations from Survey of Business Owners.

This same approach was used to examine the construction, professional, scientific and technical services, goods, and other services sectors. The following are summaries of the results of the disparity analyses.

2. Construction

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 4-29, 12 fall under the 80 percent threshold.

**Table 4-29: Disparity Ratios – Aggregated Groups
Construction, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	18.62%	s	s
Latino	19.51%	36.60%	67.00%
Native American	36.34%	32.06%	80.14%

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Asian	47.90%	46.60%	90.44%
Panel B: Disparity Ratios for All Firms			
Non-White	20.48%	38.20%	69.89%
White Women	92.45%	49.52%	89.15%
Not Non-White/Not White Women	207.49%	123.24%	104.51%

Source: CHA calculations from Survey of Business Owners.

3. Construction-Related Services

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 4-30, 12 are under the 80 percent threshold.

**Table 4-30: Disparity Ratios – Aggregated Groups
Professional, Scientific, and Technical Services, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	13.21%	26.05%	170.60%
Latino	24.81%	35.69%	179.04%
Native American	27.69%	24.04%	164.27%
Asian	49.37%	36.87%	223.08%
Panel B: Disparity Ratios for All Firms			
Non-White	27.84%	34.65%	193.44%
White Women	26.84%	30.53%	173.42%
Not Non-White/Not White Women	173.61%	135.71%	93.94%

Source: CHA calculations from Survey of Business Owners.

4. Goods

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 4-31, 15 fall under the 80 percent threshold.

**Table 4-31: Disparity Ratios – Aggregated Groups
Goods, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	1.83%	7.55%	82.29%
Latino	5.77%	11.74%	78.42%
Native American	9.02%	12.08%	102.45%
Asian	18.44%	9.97%	67.37%
Panel B: Disparity Ratios for All Firms			
Non-White	7.96%	10.77%	73.97%
White Women	9.11%	14.51%	93.05%
Not Non-White/Not White Women	246.36%	160.74%	102.43%

Source: CHA calculations from Survey of Business Owners.

5. Services

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 4-32, 16 fall under the 80 percent threshold.

**Table 4-32: Disparity Ratios – Aggregated Groups
Services, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	8.2%	18.1%	s
Latino	16.7%	25.8%	64.3%
Native American	22.8%	22.6%	s
Asian	40.8%	23.6%	63.1%

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel B: Disparity Ratios for All Firms			
Non-White	18.6%	24.2%	63.6%
White Women	24.7%	26.2%	72.9%
Not Non-White/Not White Women	261.6%	157.1%	108.9%

Source: CHA calculations from Survey of Business Owners.

D. Evidence of Disparities in Access to Business Capital

Capital is the lifeblood of any business. As presented in Chapter V, participants in the anecdotal data collection universally agreed to this fundamental fact. The interviews with business owners conducted as part of this study confirmed that small firms, especially minority- and women-owned firms, had difficulties obtaining needed working capital to perform on contracts and subcontracts, as well as expand the capacities of their firms. As discussed above, discrimination may even prevent firms from forming in the first place.

There is an extensive body of scholarly work on the relationship between personal wealth and successful entrepreneurship. There is a general consensus that disparities in personal wealth translate into disparities in business creation and ownership.¹⁶³

The Federal Reserve Board and the U.S. Small Business Administration have conducted surveys of discrimination in the small business credit market for 1993, 1998 and 2003. These Surveys of Small Business Finances (“SSBF”) are based on a large representative sample of firms with fewer than 500 employees. The main finding from these Surveys is that MBEs experience higher loan denial probabilities and pay higher interest rates than white-owned businesses, even after controlling for differences in credit worthiness and other factors. Blacks, Hispanics and Asians were more likely to be denied credit than Whites, even after controlling for firm characteristics like credit history, credit score and wealth. Blacks and Hispanics were also more likely to pay higher interest rates on the loans they did receive.¹⁶⁴

163. See, e.g., Evans, David S. and Jovanovic, Boyan, “An Estimated Model of Entrepreneurial Choice under Liquidity Constraints,” *Journal of Political Economy*, (1989); Evans, David S. and Leighton, Linda “Some empirical aspects of entrepreneurship,” *American Economic Review*, (1989).

164. See Blanchflower, D. G., Levine. P. and Zimmerman, D., “Discrimination In The Small Business Credit Market,” *Review of Economics and Statistics*, (2003); Cavalluzzo, K. S. and Cavalluzzo, L. C. (“Market structure and discrimination, the case of small businesses,” *Journal of Money, Credit, and Banking*, (1998).

A recent report to the U.S. Department of Commerce summarizes these Surveys, results from the Kauffman Firm Survey,¹⁶⁵ data from the U.S. Small Business Administration's Certified Development Company/504 Guaranteed Loan Program¹⁶⁶ and additional extensive research on the effects of discrimination on opportunities for MBEs. The most comprehensive report of its kind, "Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs", found that

Low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner's wealth can be invested directly in the business, used as collateral to obtain business loans or use to acquire other businesses.... [T]he largest single actor explaining racial disparities in business creation rates are differences in asset levels."¹⁶⁷

Some of the key findings of the Report include:

- Minority-owned firms are less likely to receive loans than non-minority owned firms regardless of firm size. According to an analysis of data from the *Survey of Small Business Finances*, for firms with gross receipts over \$500,000, 52 percent of non-minority owned firms received loans compared to 41 percent of minority-owned firms.
- When minority-owned firms do receive financing, it is for less money and at a higher interest rate than non-minority owned firms regardless of the size of the firm. Minority-owned firms paid an average of 7.8 percent in interest rates for loans compared to 6.4 percent for non-minority owned firms. Among firms with gross receipts under \$500,000, minority-owned firms paid an average of 9.1 percent in interest rates compared to 6.9 percent for non-minority owned firms.
- Minority owned firms are more likely to be denied loans. Among firms with gross receipts under \$500,000, loan denial rates for minority firms were about three times higher, at 42 percent, compared to those of non-minority owned firm, at 16 percent. For high sales firms, the rates of loan denial were almost twice as high for MBEs as for non-MBEs.
- MBEs pay higher interest rates for business loans. For all firms, MBEs paid 7.8 percent on average for loans compared with 6.4 percent for non-MBEs. The

165. http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/06/kauffmanfirmsurvey2013.pdf.

166. <http://www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq>.

167. Fairlie, R. W. and Robb, A., "Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs," U.S. Department of Commerce, Minority Business Development Agency, 2010, pp. 22-23.

difference was smaller, but still high, between MBEs and non-MBEs with high sales.

- Minority-owned firms receive smaller equity investments than non-minority owned firms even when controlling for detailed business and owner characteristics. The differences are large and statistically significant. The average amount of new equity investments in minority-owned firms receiving equity is 43 percent of the average of new equity investments in non-minority owned firms. The differences were even larger for loans received by high sales firms. Yet, venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms.¹⁶⁸
- Disparities in total investments in minority-owned firms compared to those in non-minority owned firms grew after the first year of business operations. According to the analysis of the data from the Kauffman Firm Survey, minority-owned firms' investments into their firms were about 18 percent lower in the first year of operations compared to those of non-minority owned firms. This disparity grew in the subsequent three years of operations, where minorities' investments into their firms were about 36 percent lower compared to those of non-minority owned firms.
- Minority entrepreneurs face challenges (including lower family wealth and difficulty penetrating financial markets and networks) directly related to race that limit their ability to secure financing for their businesses.¹⁶⁹

These findings are consistent with those of the 2012 study. Examining the *Survey of Small Business Finances* ("SSBF"), conducted by the Federal Reserve Board and the U.S. Small Business Administration from 1999-2003, the study found that MBEs experience significant barriers compared to similar non-M/WBEs. When minority-owned firms did apply for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences such as firm size and credit history. Loan denial rate ranged from 8 to 24 percentage points higher than for non-minority male-owned small businesses. When minority-owned firms did receive a loan, they were obligated to pay higher interest rates on the loans than comparable non-minority owned firms. These results strongly suggest that MBEs do not enjoy full and fair access to the credit necessary to perform on the County's prime contracts and associated subcontractors.

168. See Bates, T., "Venture Capital Investment in Minority Business," *Journal of Money Credit and Banking* 40, 2-3 (2008).

169. Fairlie, R.W. and Robb, A., *Race and Entrepreneurial Success: Black-, Asian- and White-Owned Businesses in the United States*, (Cambridge: MIT Press, 2008).

E. Evidence of Disparities in Access to Human Capital

There is a strong intergenerational correlation with business ownership. The probability of self-employment is significantly higher among the children of the self-employed. This was evident in the large number of non-M/WBEs in our interview groups who were second or even higher generation firms doing business for the market area. This disadvantages minorities, whose earlier generations were denied business ownership through either *de jure* segregation or *de facto* exclusion.

There is evidence that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.¹⁷⁰ Black men have been found to face a “triple disadvantage”; they are less likely than White men to:

- Have self-employed fathers;
- Become self-employed if their fathers were not self-employed; and
- To follow their fathers into self-employment.¹⁷¹

Intergenerational links are also critical to the success of the businesses that do form.¹⁷² Working in a family business leads to more successful firms by new owners. One study found that only 12.6 percent of Black business owners had prior work experiences in a family business as compared to 23.3 percent of White business owners.¹⁷³ This creates a cycle of low rates of minority ownership and worse outcomes being passed from one generation to the next, with the corresponding perpetuation of advantages to White-owned firms.

Similarly, unequal access to business networks reinforces exclusionary patterns. The composition and size of business networks are associated with self-employment rates.¹⁷⁴ The U.S. Department of Commerce has reported that the ability to form strategic alliances with other firms is important for success.¹⁷⁵ M/WBEs in our interviews reported that they felt excluded from the networks that help to create success in the highway construction industry.

170. Fairlie, R. W., “The Absence of the African-American Owned Business, An Analysis of the Dynamics of Self-Employment,” *Journal of Labor Economics*, (1999).

171. Hout, M. and Rosen, H. S., “Self-employment, Family Background, and Race,” *Journal of Human Resources* 35, no.4 (2000).

172. Fairlie, R.W. and Robb, A., “Why are black-owned businesses less successful than White-owned businesses? The role of families, inheritances, and business human capital,” *Journal of Labor Economics*, (2007).

173. *Id.*

174. Allen, W. D., “Social Networks and Self-Employment,” *Journal of Socio-Economics* 29, no.5 (2000).

175. Increasing MBE Competitiveness through strategic Alliances (Minority Business Development Agency, 2008).

V. BUSINESS OWNER' EXPERIENCES IN HARRIS COUNTY'S MARKET AND DOING BUSINESS WITH HARRIS COUNTY

A. Qualitative Evidence of Race and Gender barriers in Harris County's Market

In addition to the quantitative data presented in Chapter III and Chapter IV, a disparity study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities in Harris County. This evidence is relevant to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes, as well as the likely efficacy of any race- and gender-neutral remedies employed by the County. As discussed in Chapter II, this type of anecdotal data has been held by the courts to be relevant and probative under the Fourteenth Amendment of whether the County has a “strong basis in evidence” to enact a race- and gender-conscious program, and if so, what narrowly tailored remedies are supportable to reduce the effects of past and current discrimination, and create a level playing field for contract opportunities for all firms.

The Supreme Court has held that anecdotal evidence can be persuasive because it “brought the cold [statistics] convincingly to life.”¹⁷⁶ Evidence about discriminatory practices engaged in by prime contractors, agency personnel, and other actors relevant to business opportunities has been found relevant regarding barriers both to minority firms’ business formation and to their success on governmental projects.¹⁷⁷ While anecdotal evidence is insufficient standing alone, “[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence

176. *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

177. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1172 (10th Cir. 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001).

of a [government’s] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”¹⁷⁸ [W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”¹⁷⁹

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making, as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the state’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”¹⁸⁰ Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”¹⁸¹

To explore this type of anecdotal evidence of possible discrimination against minorities and women in Harris County’s geographic and industry markets and the effectiveness of its current procurement policies, we conducted a public webinar, and small group business owner and stakeholder interviews in person and by telephone. Ninety-nine individuals participated. We met with a broad cross section of business owners from the County’s geographic and industry markets. Firms ranged in size from large national businesses to established family-owned firms to new start-ups. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts with the County, other government agencies, and in the private sector. We also elicited recommendations for effective measures to reduce barriers and create equal opportunities.

Most minority and women owners reported that they continue to encounter discriminatory attitudes, stereotypes and negative perceptions of their qualifications, professionalism and capabilities from other business owners. The assumption is that minority firms are less qualified. While sometimes subtle,¹⁸² these biases about minorities’ and women’s lack of competence affect all aspects of their attempts to obtain contracts and to be treated equally in performing contract

178. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1120, 1530 (10th Cir. 1994) (“*Concrete Works II*”).

179. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 926 (11th Cir. 1997).

180. *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 249 (4th Cir. 2010).

181. *Concrete Works II*, 321 F.3d at 989.

182. See, e.g., <http://www.sciencedirect.com/science/article/pii/S0191308509000239>.

work. These types of barriers led minorities and women to unanimous agreement that M/WBE contract goals are necessary to level the playing field and equalize opportunities.

The following are summaries of the issues discussed. Quotations are indented and may have been shortened for readability. The statements are representative of the views expressed over the many sessions by numerous participants..

One of the biggest general contractors in this part of Texas got up and says, "I don't want to do business with [minorities].... The only reason why I'm here is because I got a contract and the state is paying for it, or else I wouldn't be doing business with you."

We are a Native American-owned firm..... The prime contractor was so bold as to say that, "You guys just need to go back to the reservation and focus on casinos."... So, I had to come out swinging, and defend not only my heritage, but also my work ethic, my level of competence, my level of personnel.

In most cases, everybody's qualified to do the job. Those are table stakes. The question is how hard do we have to work, how qualified do we have to be, versus the other folks? Are they working as hard, or are they as qualified, but still they're getting more? This is not a question of somebody's not working hard or somebody's not qualified, it's a question of how hard we gotta do it, how qualified we gotta be, versus somebody else who's still getting ten times more than we are getting.

You can't assume that the door is open wide open, because that's not necessarily true.... That's to me where your race and gender come in.

Several M/WBEs reported that prime vendors undervalue their capabilities and work products and put unfair pressure on small firms to lower prices to the prime's advantage.

There's definitely on fees, an expectation, that if you are woman-owned or minority owned firm, that you're going to do the work for less. Same work, for less.

It's the minorities that are the subs, women and minorities that are the subs on the primes. They're forcing you to go below a level of margin because they have the capacity to do it because they're making money in other regions, not just this locale.

Even though I had the [subcontract] award [on a Houston Metro project] and I had already put stuff on the project, another prime came in [after the low bidder was kicked off the project] who was second in line, who also used my number on bid day. That prime tried to cut me

out. They called me. They wanted to negotiate my contract after I was already awarded by the other prime. They both used my number. It was really ugly.

A woman consultant recounted how her authority is often undermined.

In presenting the various options and moving forward from concept into detail design, sitting around a room, and except for maybe an architect, I was always the only woman at the table. It's an expertise that I've carried for many years, and literally, repeatedly to the owners of a government entity, would present the case and why this is the recommendation to move forward. And it would be silence in the room. And then, this junior, who was not even a licensed P[rofessional] E[ngineer] yet, working underneath of me, who helped me put the slides together, and did some of the analysis under my leadership, would - they'd ask a couple of questions and this young man would answer the questions based on the slides and flipping back and forth. And then all of a sudden, the recommendation was accepted because this young man, who was my employee, was giving the answer instead of me.

Some White women reported they had not faced gender-based barriers.

I don't think we've had any issues getting business being a woman-owned business. I don't think that's ever been a barrier for us. We've actually seen a lot of success come from getting our certifications, our woman-owned business and minority business certifications. The struggles that we've had have been the nature of what we do as consultants. A lot of the work that we do is done on the front end of large construction projects, and like you said, is typically going to be subbed under our prime.

A few minority owners downplayed the effect of race on business opportunities.

Race is on the table, but it may be number five or number six. It's not one, two or three.

These types of barriers led minorities and women to almost unanimous agreement that M/WBE goals will be necessary to level the playing field and equalize opportunities on County prime contracts and subcontracts. In response to the question, "Do contractors that use you on projects with goals, call you and use you on projects without goals?" many M/WBEs responded in the negative.

No.

No.

[Prime contractors] only want me because I'm HUB. They would've never called for any other reason.

I have never had a contract with a general contractor in 36 years that's private. Everything is government, and if the government didn't say use a minority, they wouldn't do it.

I'm not sure if [the project executive] was consciously doing this. He'd always dangle the carrot, "Oh, you know if you do good here or whatever, there's a lot of private work we can hook you up." I'm, like, why aren't you sending me those invites? If I can do one, two, three-million-dollar electrical work for you at a hospital, I could also do it in a private setting.

Minority and women owners were clear that they seek a level playing field, not an unfair advantage.

I don't want the job because I'm a WBE. That's the last thing I want. I want it because I have the best product.

I don't want to be a Hispanic business. I want to be a business.

All we want is a chance, all we want is an opportunity to show you what we can do. And if we don't do the job, they don't have to hire us again.... Thankfully, we've been very successful doing that. But we have not been able to break into Harris County.

We don't need a hand out, we just need a fair, level playing field.

I hadn't worked for this architect, but we go into the presentation [for a County project] ... and he gets up and he says, "I have the most diverse group ever. I have an Indian, I have a Mexican, I have black, I have a white." I was just like, "Oh, just shoot me now." It's not that we're qualified, it's that I put this team together because it's going to fit your little box. I don't want to be on a team because I'm a woman, or because I'm Hispanic. I want to be on a team because I'm qualified, because I do a good job.

We've been in business for well over 24 years and most of the jobs I do aren't because I'm MBE or WBE. It's a nice thing to have, it's a nice little aside, but anytime I get a cold call from an engineer or architect that doesn't know me and they're only calling me because of that, I won't take the job.

Prime contracts were reported to be especially difficult to achieve.

We've not tried to go after anything prime in Harris County. The number one reason is relationships. We've found that when we've

attended events and we've tried to network, that it is very deeply rooted in existing relationships and a lot of repeat people doing a lot of repeat work. And so that was something that we just felt like as a small business, as a disadvantaged business. You've got to be really targeted where you're going to form new relationships because you want to make sure you have substantial growth out of it. That's such a huge investment. And then lastly, we've had great success in programs with other agencies, both HUB programs and DBE programs, federally funded projects and state funded projects as well as municipal funded projects. And what we have found is that where it's been most successful is when the program allows that fostering of a disadvantaged business to go from a tier two to growing to do prime work. Because that's what allows us to essentially grow and be successful.

[Agencies] write the RFP or RFQ in such a way, that you know you can't meet it, so you don't propose.

When we are a sub with [a large firm] where there's a goal required, they very quickly want to hire your employees, very quickly want to squeeze the work down to minimize how much you're doing for them. So, it makes it very difficult to grow successfully without achieving prime level work.

You turn in your invoice, it goes to the engineering company, they approve, then it goes to Harris County, they review, they approve.... And, if you miss that County Commission's Court date, it goes to the next one. So, in some cases, you have 120 days [before you get paid as the subconsultant].

The inability to fairly access capital was a barrier to many firms.

If you are a disadvantaged business and you've gone through any kind of declining cycle in revenues, what do you do? You take money out of your personal savings and you fund the business to stay alive. And so, when that happens, your credit can suffer or your debt to income ratio suffers, and how long do you go without paying yourself the level salary?

Women in the workplace are getting paid a percentage of the dollar that men are getting for the same job. [Lenders] base financing on your personal credit. Then, they know a White male can go out there and get a better-paying job if my company goes under, and I'll still pay it back. They don't believe that for the woman, or at least not as easily... That [financial] building block of having a successful business is just plain easier for the White man.

Most firms that that have participated in a government contracting affirmative action programs found them to be beneficial.

[An] MBE program, it helped me.... If the County was to implement something like that, I think it would be very beneficial for newer companies.

A small business program would be beneficial, a DBE goal or HUB goal or whatever you want to call it, would be beneficial.

A lot of the big construction companies already have their partners [so goals open doors].

[Goals] force the big companies to look for different options.

You can't get started with the type of contracts to really grow your company this size, unless you are a subcontractor to a large prime contractor, because you will never do the type of projects that will get you to capacity. It's not possible.

If I can do that for some random [general contractor] that came from Georgia, I am sure I could do it for some of these customers that I'm working with [in Houston if the county set M/WBE goals].

I can never even get a meeting with anybody at the County. So, I'm hoping that things will change as a result of this study.

Some M/WBEs have used these programs as a platform to seek private sector work.

Initially, [the work we get is] goals driven. But, I think if we do good work, we've had several primes that we've continued doing business with them, past that initial project.

All of my largest contracts, contracts that are a million dollars, it has nothing to do with me being a minority contractor. I would say that the influence of me being a minority contractor on my business may be 30 percent, okay? Now, public work pays slowly, regardless of what anybody says, they pay slowly. A hundred days, so you have to be able to hold on for a hundred days before you get paid. I get paid because of the quality of my work ... I hardly read the contracts.... [But the programs] helped me begin, it helped me start.

A few interview subjects stated that the programs had provided no benefit.

It's not worth it getting all these minorities certifications.... I've never seen one single job.

Many participants described entrenched relationships at Harris County as major impediments to obtaining County work.

You call and call and call [prime vendors] and you sort of feel like you're just bugging them. But they never call back. They never do anything. So, just seems like they're just used to doing business with the same companies and that's who they choose to do business with.

You're not in the frat. You didn't get the letter, you know? You didn't get the call. But whatever you need to do to get in, you need to figure it out.

A lot of the ability to do work with Harris County depends on relationships. I've been in the industry for over 50 years, my company is 40 years old, and it's been my experience that the County's got no set procedure for choosing consultants except through relationships. So, you go out and you present your qualifications, and when projects come around, they may contact you and ask you for a proposal. Now, they also ask for a proposal from other people and then that get evaluated and the firm get chosen, so there again a lot does have to depend on relationships. I've been told by at least one County commissioner that you don't have enough money to compete on the basis of contributions to my campaign.

Not everyone can pay 10 grand, 20 grand to help sponsor these fundraisers that get these top billings. And when you go back and you look at who's paid the most money to Commissioner X, and then who's got the most work out of the Commissioner those following months, there's a correlation. And as a small business, we can't afford to pay those 10 thousand, 20 thousand dollar things every three or four months just to be able to get a little bit of work out of them.... [Commissioners] will let out a project to a prime, and they will say to that prime, "Hey, you give us a list of three people that you want subcontracting for a survey, geotech, blah blah blah, three companies," and then they will pick and choose who they want off of there. There's no DBE goal on that so they may choose the survey company that gave them the most money in the last fundraiser and the geotech that gave them the most money in the last fundraiser.... The primes make a suggestion of, "Hey, I want to work with these three companies," and then the Commissioners will say, "Oh, okay, so out of those three companies, choose this company."

Another participant had not experienced this type of entrenched network.

I started my company four years ago and within the first year I got a county contract, it was a small one, and I never gave that County

Commissioner one nickel. And as of this date, I still haven't given a County Commissioner one nickel.

Contract size is a major impediment to M/WBEs performing work for the County, especially as prime vendors.

In the engineering side, more than anything else, it's just the contracts are way too big. They may have one or two SBE or subcontractors that they do [business with], so it limits the amount of people that can actually participate.... A good example is the disaster program contract that's in place right now.... If they broke that down to more, like three or four, two or three contracts, then you would instead of just four participating companies, you would have 10.

I agree 100 percent.

Experience requirements were often another obstacle to M/WBEs and other small firms serving as County prime vendors.

One of the things that we were not able to do, was count the employees' resume to the [experience requirements].... Because I have some people on staff who've been involved in, from a management perspective, who've been involved in hundred and ten-million-dollar school projects, large, multi-family projects, high-rise projects, and they've seen the potential in our firm, and have chosen to come there and bring that experience. However, I'm not able to leverage that experience in terms of a solicitation, and have it count toward my firm's experience. We may not have performed that project under the banner of this firm, but that doesn't preclude that project from ever being performed by the people who did it in the first place. And now, those people happen to be under my banner.

Many M/WBEs had recommendations for how the County should administer a race- and gender-based program. The most widely shared comments were about the need to monitor the new program to ensure that prime vendors keep their M/WBE contractual commitments.

If you just looking at goals, goals in itself, without enforcements, it's not effective.

[Staying in compliance is] where the fall out is.

[There should be] strong penalties for not meeting subcontracting goals way before the contract is over.

Compliance is huge.

Part of the problem is accountability.... The State [of Texas] has told me, with regard to submitting bids for the Texas HUB requirement, that I need to go back to the contractor, but the contractor is the problem.... The government doesn't hold the contractor accountable.

It is also important the bids and proposals promising M/WBE participation be closely evaluated to ensure that the proposed subcontractor is performing a commercially useful function.

A site visit is essential because we have had minority bidders ... and they didn't have the facility. They were brokers, so they would bid on the project and I didn't think that that was fair. I think a site visit is essential to make sure that whoever is bidding has a facility to handle that work.

We've seen primes hire M/WBEs or contract with M/WBEs that ... [are] brokers. They're not qualified, but they've contracted with them because they think they have a political way or political in to win the RFP. So, then they win the RFP, and someone like me or her or her, who's extremely qualified to do the work, doesn't have the relationship, doesn't get picked. But the subcontractor that does, has no qualifications.

The documentation of prime vendors that are unable to meet contract goals, and therefore submit evidence of their good faith efforts to do so, must also be carefully scrutinized.

Put robust efforts behind what those good faith efforts are.

One suggestion was for the County to conduct more outreach to M/WBEs and small local firms.

We've seen a lot of success with other agencies that have hosted prime and sub contract events where, if the agency has an initiative, a program, they'll get together their primes and they'll invite all of their WBEs, MBEs all of those for a meet and greet when they have big capital projects coming up and give them the opportunity to network and use those subs.

I think one thing that the University of Houston does well is that they have meetings where the minority firms or women-owned firms can meet with the larger firms and have some outreach programs.

Several M/WBEs suggested the County adopt a mentor-protégé program.

Let's see how you can mentor this smaller company to grow.... The mentor-protégé system could be used as a tool to really help [new firms].

Mentorship is what's missing.

Houston Community College has a lot of money that they have to put programs together. And they said if we will just call them and tell them what program we want, and we can get, say, 10 to 15 people in there, they'll design the program. So, they could put a mentoring program together for anybody.

HCC does a great job of putting a good foot forward to small businesses.

Larger, majority-owned firm representatives also supported some type of mentor-protégé initiative.

I'm a big fan of being a participant in mentor-protégé programs because you learn how to stay in business.

We'll pick a smaller subcontractor and help them through the business cycle, learning the business ends of things. [We] will sit and meet with them on a monthly basis and teach them about anything that they want help with. Or that are through estimating operations or sometimes it's through H[uman] R[esources], we'll get them in with our office and show them how to set up things to do. So, it's been beneficial for both of us.

We've been involved in several mentor programs with the universities, like University of Texas, and so there's a lot of programs out that has been beneficial.

A national construction firm reported it has a formal program.

We've got a very strong formula. We partner with for example, H[ouston] C[ommunity] C[ollege] and others.... We line up banks. We've got a certification program and it's a 6 week or 12 week course. It's an actual formalized process. We deploy it on larger projects, and we offer it as an issue.

Some general contractors reported that they engage in informal mentoring activities.

We don't formally mentor subcontractors. We have informal relationships with subs in areas that we do subcontract out. So, that helps because there's no conflict of interest there.

I would bet that everybody in this room mentored somebody in some way. The first time they've ever done certified payroll, they don't call the County, they don't call the State, they call the person at the other office that they're doing it for because we've got somebody who's been

doing it for years. They call us and then we step them through it. Certified payroll, how they have to turn in their invoices. You know, your invoice didn't match with the [how the] County pays or the State pays.... A lot of times, we pay subcontractors ahead of the time we get paid because we know that they, particularly the smaller ones, they can't cash flow their work in the civil [construction] industry. It's very, very expensive to get into business and it's a very heavy cash flow business.

Cautionary statements about mentor-protégé programs were made by both minority and majority business owners.

I went into a mentor protégé program with the Texas Department of Criminal Justice, and I met with the primary contractor and that's where it ended. It didn't go anywhere. They wouldn't return phone calls after that initial meeting. No emails. That was about two and a half years ago.... I spoke to the HUB coordinator about it and ... [that person] referred me back to the contractor.

I don't have time to be a mentee. I don't have time to be a mentor.

Typically, it gets started really well but then the small business, she doesn't have a lot of time. Before long, it kind of just dwindles away. It gets started really well, but we're giving up our time and they're giving up their time and typically they're a one, two or three person shop.

Having the mentor-protégé [relationship] starting earlier [would help], because the one thing that's changed from Ike, if you all lived through Ike, you know in 2008 and Harvey, is now [the] F[ederal] E[mergency] M[anagement] A[dministration] said we got to spend the money in five years.

B. Doing Business with Harris County

Firms that have done business with Harris County almost universally reported good experiences.

Harris County probably is one of the best entities in this area to work for. They get jobs out, we get contracts quickly, we know when we're gonna start. They have a little bit of trouble closing them out but we typically get paid promptly. Great people to work for. Typically, they probably get the best pricing on roads, underground in this part of the United States because they're so good to work for. The Toll Road also and Harris County Flood Control, all those are good people to work for.

Fantastic. I can say I don't have one negative thing to say about working with Harris County. Even from their paying of their bills, working with them, figuring things out together. I think they're just a really good client to have.

We find them very professional. There's a high level of caliber amongst Harris County planners and project managers, engineering side.

I've had a great experience with the County.... I love dealing with them. They're my number one customer.

It's easy to do business with them [as a consulting firm].

Harris County is probably the most streamlined as far as processes go, which obviously helps the effort. I think they adjust the delivery method as applicable to the project and stage of the project and the speed of the market that they need.

We used a lot of different delivery methods with Harris County, in several different Harris county entities as well. And, it's been a positive experience all the way around

A minority firm that has received prime awards agreed.

We're a minority-owned business and we've never had any issue with understanding the solicitations or responding to solicitations or being awarded contract.... It doesn't really matter if [the County adopts a M/WBE program], the way they deliver and the way that they that they put their solicitations out are available to everybody.

Relationships are crucial, however.

Commissioners like to pick firms that have people that are embedded in the community and supportive of things other than just say, the Toll Road Authority. They want to see engagement in community events and things like that. So, when we're looking to team or when we're looking for work, for example if it's the Toll Road, we'll say, well, we've been doing work in this quadrant for this amount of time, we know the roadway, we know the environmental concerns, we think that we're better qualified for it based on our experience. Then, we start to team with, whether it's soils testing or geotech or other firms that are equally well positioned. But, it is a system that I think can easily lead to frustration on the part of those that don't know how to play the game or don't have the warm relationships.

Several participants requested the County provide training about how to access County contracting opportunities and meet compliance requirements.

As a new company, how do we find out about the primes that are bidding or even just the contracts period that are coming up?

If the County could hold seminars or webinars to help our people who are in the office ... be in compliance with our contracts, that'd be helpful.

A lot of those small companies I deal with that are trying to get work with some of the larger contractors, they don't understand the process. They don't know what information is needed by the larger firms, what information is required because that's what the firm wants or what information is required because that's what the entity wants. And a lot of our larger firms do work across entities. So, they do city work, county work, and a state work. And each of those entities may have different requirements and smaller businesses who are used to working or doing City work, who want to start doing County work or working with larger firms in doing that work, need to understand what the requirements are for that. And sometimes the larger businesses have the time, energy and effort to be able to help walk them through it. But any types of programs that the County can provide will be beneficial.

Many prime contractors had advice for Harris County about adopting a race- and gender-conscious program. While not opposed to a new initiative, they cautioned against modeling the program after the City of Houston's M/W/SBE program.

If the County were to follow any program on the civil side, it would be the State as opposed to the City. I think the State has a lot better program. They have lower goals, but they use commercially useful function. The City has no commercially useful function. They say they do, but they really don't. There's a lot of pass throughs because their goals are so high. A lot of pass throughs are used every day to meet the goals and to me that's not the purpose of what we're doing.

The goals that [the City of Houston] sets and the way that they are set up with their group of subcontractors, they really limit the subs that we can use. And so, I would discourage that type of deal versus the State where there's a bigger group or pool of certified HUBs to work with. I have subs that are in Houston that aren't certified to work for the City, but they're HUB subcontractors.... I found it's more difficult to meet the goals that they set because of the limits they put on their subcontractors.

The stuff the City of Houston does, it just doesn't seem to work.

There's got to be some flexibility and some decision making built into that based on the project.

Long lead times to become City-certified were a particular concern.

We've had to help people get certified [with the] City of Houston in order to utilize them. And yeah, like he said, I would discourage the County from adopting something like that.... And sometimes the job is already started, in process and already done by the time their certification comes in.

I can endorse exactly that. Handheld a company for 11 months, a demolition company, 11 months. And we withheld and they agreed to withholding of their payments so that they could get on board with us. And we eventually got them on board after 11 months, but the City said they weren't nominated at the beginning of the project. So, you can't use them. And that has demotivated me from ever going through that process with another company, with the City of Houston.... I tried to increase [the City's] pool, but it looks like I have failed, and I don't want to go through this and fail again.

There were also concerns that there might not be a sufficient number of qualified M/WBEs to meet new County contract goals.

If you want me to meet your goal, help raise the number of resources to help me meet it.

[M/WBEs'] bonding capacity's too low, their insurance has a D rating on it instead of an A or a B rating on it. So, that's where you get into a bind.

If [the agency tells] you that you've got to use this [certified firm], then you're taking on that responsibility of this subcontractor coming in and doing the work. If something occurs to that subcontractor, you're liable.

We work with [M/WBEs] with banks, even. We have lined up banks to help them. But even then, if they can't get the ratings, if the external agencies, insurance, banks, etc., don't view these businesses as capable of surviving in the market, then we can't hire them. The County can't either.

We've been able to meet all the goals that we've set and exceed them. From time to time on those smaller projects or more specialized projects, it's difficult to sometimes find a qualified minority business that can perform that work.

Some general contractors asserted that they use M/WBEs regardless of whether there is a goal.

That [Harris County does not have a M/WBE program] has not prevented us from using DBEs and small businesses. For us, it's if you can do the work and you're capable, you get the work.... It's really the essence of a race-neutral program. We would use a subcontractor regardless of their certification if they perform well and they do very well, we will keep on using them again and again.

If we have an opportunity for a qualified MBE firm that we've worked with in the past, we go with them.

We're guilty of a lot of times using the same [M/WBEs], because we can count on them. But we do use them on every job we do.

Goals sometimes negatively affect non-M/WBE subcontractors and subconsultants.

We have not been able to submit on any City [of Houston] projects because they have a minority- [and] women-owned business goal, and the primes will go select a minority firm or a woman owned firm to use as their sub. Even when we have clients we work with for a very long time, they'll tell us plainly, if you don't have the cert, we can't use you on these projects. We're a small business enterprise, but that certification program doesn't help us at all.... The only public entity in Harris County that we work with is Harris County [because there are no M/WBE goals].

In the private sector when we are competing with minority firms that do work for City and County, we're losing out on price to them ... because they get work from the City, from the County, from [Houston] Metro on projects that we just don't have a shot on.

C. Conclusion

Consistent with quantitative evidence reported in this study, anecdotal interview information suggests that minorities and women continue to suffer discriminatory barriers to full and fair access to Harris County, and private sector, contracts and subcontracts. While not definitive proof that the County should apply race- and gender-conscious measures to reduce these impediments, M/WBEs' experiences are the type of evidence that, especially when considered alongside the study's statistical evidence, the courts have found to be probative of whether the County may use narrowly tailored M/WBE contract goals to address discriminatory barriers. This element of the "strong basis in evidence" necessary for race-conscious relief also provides guidance about what types of narrowly tailored remedies will level the playing field for County-funded opportunities.



VI. RECOMMENDATIONS FOR A MINORITY- AND WOMEN- OWNED BUSINESS ENTERPRISE PROGRAM FOR HARRIS COUNTY

The quantitative and qualitative data presented in this study provide a thorough examination of whether minority- and women-owned business enterprises (“M/WBEs”) operating in Harris County’s geographic and procurement markets have full and fair opportunities to compete for its prime contracts and associated subcontracts. As required by strict constitutional scrutiny, we analyzed evidence of such firms’ utilization by the County as compared to their availability in its market area, as well as business owners’ experiences in obtaining County work. We further analyzed M/WBEs’ opportunities in the overall Harris County economy. These statistical and anecdotal data provide the evidence necessary to determine whether there is a strong basis in evidence that M/WBEs suffer discrimination in access to County contracts on the basis of race or gender, and if so, what narrowly tailored remedies are appropriate.

The study results support the County’s compelling interest in implementing a race- and gender-conscious contracting program. The record— both quantitative and qualitative— establishes that M/WBEs in several sectors in the County’s market area continue to experience significant disparities in their access to County contracts and private sector opportunities and to resources necessary for business success. Results provide a sufficient basis for the use of narrowly tailored remedial race- and gender-based measures to ensure equal opportunities for all firms to do business with Harris County.

The County has initiated some efforts to level the playing field, including providing information on how to conduct business with the County and engaging in outreach efforts. However, much more could be done. In our judgment, the results of this report provide the constitutionally required information to sustain a new and broad approach to contracting equity and inclusion. These findings support the inference that discrimination remains a barrier to full and fair opportunities for all firms, and in the absence of contract goals, M/WBEs in many industries suffered significant dispari-

ties on County-funded jobs. Without the use of contract goals to level the playing field, the County would likely function as a “passive participant” in the “market failure” of discrimination. We therefore recommend the implementation of a program that contains the necessary elements for greater success in reducing barriers and that employs national best practices to increase inclusion in government contracting.

As a general matter, Harris County should model its program on the elements of the Disadvantaged Business Enterprise (“DBE”) Program for federally-assisted transportation contracts.¹⁸³ Courts have pointed to an agency’s reliance on Part 26 as a guide as evidence that the local agency’s program is constitutionally narrowly tailored and employs best practices.

Based on this case law and national best practices for M/WBE programs, we recommend the following elements of a narrowly tailored M/WBE program:

A. Implement Race- and Gender-Neutral Measures

The courts require that governments use race- and gender-neutral approaches to the maximum feasible extent to address identified discrimination. This is a critical element of narrowly tailoring the program, so that the burden on non-M/WBEs is no more than necessary to achieve the County’s remedial purposes. Increased participation by M/WBEs through race-neutral measures will also reduce the need to set M/WBE contract goals and assist firms to obtain prime contracts with the County.

The following enhancements of the County’s current efforts, based on the business owner interviews, the input from senior County management, and national best standards for M/WBE programs, will help to meet these standards.

1. Fully Implement an Electronic Contracting Data Collection, Monitoring and Notification System

A critical element of this study and a major challenge was data collection of full and complete prime contract and associated subcontractor records. As is very common, the County did not have the information needed for the inclusion of subcontractor payments in the analysis. There was no centralized database to track contract data, and the County did not track subcontractor data. All required information had to be created manually. Further, the County could not provide verified data on what it had paid to prime contractors. This required the County to devise a system for researching and eventually providing this information to CHA.

183. 49 C.F.R. Part 26.

These problems led to major delays in conducting the study. In addition to hindering research, the lack of a system will also make it very difficult to monitor, enforce and review any new initiatives. A good system is the most critical first step that Harris County can take.

The County should immediately ensure that it is implementing as part of its existing electronic data collection system the following functionality:

- Full contact information for all firms, including email addresses, NAICS codes, race and gender ownership, and M/WBE/small business certification status.
- Contract/project-specific goal setting, using the data from this study.
- Utilization plan capture for prime contractor submission of subcontractor utilization plans, including real-time verification of M/WBE certification status and NAICS codes, and proposed utilization/goal validation.
- Contract compliance for certified and non-certified prime contract and subcontract payments for all formally procured contracts for all tiers of all subcontractors, both M/WBEs and non-M/WBEs; verification of prompt payments to subcontractors; and information sharing between the County, prime vendors and subcontractors about the status of pay applications.
- Program report generation that provides data on utilization by industries, race, gender, dollar amount, procurement method, etc.
- An integrated email notification and reminder engine to inform contractors of required actions, including reporting mandates and dates.
- Outreach tools for eBlasts and related communications, and event management for tracking registration and attendance.
- Access by authorized County staff, prime contractors and subcontractors to perform all necessary activities.

2. Create an Office of Business Opportunity and Equity

The County should create an Office of Business Opportunity and Equity to oversee all efforts towards contracting diversity and inclusion. This new Office should report directly to the County Judge¹⁸⁴ and have the same level of authority as other Departments. This independence will signal the importance

184. See 49 C.F.R. §26.45 (“You must have a DBE liaison officer, who shall have direct, independent access to your Chief Executive Officer concerning DBE program matters. The liaison officer shall be responsible for implementing all aspects of your DBE program. You must also have adequate staff to administer the program in compliance with this part.”).

of this function and provide it with the bureaucratic stature necessary to move new initiatives forward.

Staff should be responsible for the M/WBE program elements of the contract award process (outreach, goal setting, bid and proposal review for compliance, etc.) and the contract performance process (goal attainment, substitution reviews, prompt payment tracking, etc.). This will ensure that the County is following the requirements of the M/WBE program.

The new Office should work closely with the Office of the Purchasing Agent (“Purchasing”). Purchasing’s current policy is to encourage participation by HUBs in formal and informal procurement processes as providers of goods and services at competitive prices to the County. HUBs are explicitly recognized as an important element of the County’s supplier base; therefore, participation is not limited to the small or less complex jobs. Participation is encouraged at all levels. Vendors may register on the Harris County Purchasing website to obtain automatic notification of jobs available for bidding.

Various business associations or agencies such as the Houston Hispanic Chamber of Commerce have links to the Purchasing website so their membership can be aware of business opportunities.

Purchasing has sought participation through three primary means:

- Each buyer is expected to contact a minimum of one new HUB vendor weekly for bid solicitations valued at \$50,000 or less.
- All notices of Bids and Requests for Proposals valued in excess of \$50,000 are published in the Houston Chronicle and on the Harris County Purchasing website.
- The Purchasing Office participates in numerous trade shows/expos, outreach programs, conferences and other activities designed to promote the use of HUBs, as well as provide guidelines on how to do business with Harris County.

These activities should continue in coordination with the new Office.

Cooperation and coordination with other functions, such as the Toll Road and the Flood Control District, etc., will also be essential. The supplier diversity Office is a facilitation function, not a direct user department, so its mission must be integrated into all County departments. To succeed, the program must be viewed as the responsibility of everyone, not just the Office.

3. Increase Vendor Communication and Outreach to M/WBEs and Small Firms

The County has a current procedure for outreach to Historically Underutilized Businesses. The procedure embodies the County's commitment to ensuring all vendors are afforded the maximum opportunity to participate in the County's procurement process. County staff are to make a good faith effort to contact qualified local, state and federally certified HUBs, and encourage participation in the procurement process. The Purchasing Office also encourages various HUB organizations to circulate information to their members pertaining to Harris County bid opportunities.

While the efforts have been important, new program initiatives will require increased communication with the contracting community. County staff also stressed this point. In addition to continuing to notify minority- and women-focused organizations, the County should conduct more regularly scheduled vendor outreach events to provide information and address questions regarding upcoming opportunities, as well as facilitate "matchmaking" sessions between prime contractors and subcontractors. These events should include general fairs as well as meetings targeted towards specific industries or communities, *e.g.*, engineering projects.

Another improvement would be an annual contracting forecast of larger contracts to permit vendors to plan their work and form teams. Further, as is the case with many governments, the study revealed that M/WBEs are receiving few opportunities in several industry codes. We suggest that special outreach for larger projects be conducted to firms in those sectors so that they are aware of opportunities and can make connections with other vendors as subcontractors or joint venture partners. Activities could include targeted emails about future contracts, matchmaking events focusing on those industries, and identification of firms that are not currently certified, but might be eligible for inclusion, to encourage applications.

Further, potential vendors requested training in how to do business with Harris County. In addition to written materials now on the website, the County could hold in person sessions and create training videos that provide information on all aspects of County contracting.

4. Focus on Reducing Barriers to M/WBE Prime Contract Awards

Interviewees reported that their firms would like to perform as prime vendors on County contracts. Given the size of the County's budget, there are numerous opportunities for smaller firms to participate. Several steps should be implemented:

- Develop contract specifications with an eye towards unbundling projects into less complex scopes and lower dollar values. Not only will this permit smaller firms to perform in general, it will also reduce the barriers of surety bonding (for construction projects) and financing the jobs (for all industries). Examples could include maintenance and landscaping contracts; professional services contracts such as information technology consulting and hardware; and commodities purchases.
- Review experience requirements with the goal of reducing them to the lowest level necessary to ensure the bidder has adequate experience, perhaps by recognizing similar though not identical types of work, including work performed for other governments and private sector clients.
- Review surety bonding and insurance requirements so they are no greater than necessary to protect Harris County's interests. These possible barriers to contracting by small firms have been mentioned by the courts as areas to be considered. Steps might include reducing or eliminating insurance requirements on smaller contracts and removing the cost of the surety bonds from the calculation of the lowest apparent bidder on appropriate solicitations.

5. Consider Partnering with Other Agencies and Local Organizations to Provide Bonding, Financing and Technical Assistance Programs

Both M/WBEs and non-M/WBEs supported services to assist M/WBEs to increase their skills and capabilities. Bonding and financing programs assist small firms by providing loans and issuing surety bonds to certified contractors, with low interest rates. The programs may also provide general banking services on favorable terms to applicant firms. In addition, technical assistance with critical business skills such as estimating, accounting, safety, marketing, legal compliance, etc., could be made available in conjunction with the existing efforts of the Harris County area organizations such as chambers of commerce, professional associations, community-based organizations, etc. Partnering with these types of programs will allow the County to leverage their expertise, knowledge and experience in assisting these types of businesses. Several interview participants suggested exploring a relationship with Houston Community College to provide training.

B. Adopt a Minority- and Women-Owned Business Enterprise Program

The study's results support the determination that the County has a strong basis in evidence to implement a race- and gender-conscious M/WBE Program. The

record— both quantitative and qualitative— establishes that M/WBEs in the County’s market area experience significant disparities in their access to contracts without M/WBE goals, private sector opportunities and to resources necessary for business success. The disparity results are stark:

Table 6-1: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	6.0%‡	43.0%‡*	19.8%‡	22.8%‡	54.1%‡	32.0%‡***	126.8%***

Source: CHA analysis of the County data.

‡ Indicates substantive significance

***Indicates statistical significance at the 0.001 level¹⁸⁵

The results of the economy-wide analyses are equally compelling. Data from the Census Bureau’s *Survey of Business Owners* indicate very large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms. Similarly, data from the Census Bureau’s *American Community Survey* (“ACS”) indicate that Blacks, Hispanics and White women were underutilized relative to White men. Controlling for other factors relevant to business outcomes, wages and business earnings were lower for these groups compared to White men. Data from the ACS further indicate that non-Whites and White women are less likely to form businesses compared to similarly situated White men.

Our interviews with 99 individuals about their experiences in the County’s market area further revealed the existence of persistent barriers on the basis of race and/or gender. Many M/WBEs reported that they still encounter barriers based on race and/or gender and that without affirmative intervention to increase opportunities through contract goals, they will continue to be denied and full opportunities to compete.

This overwhelming quantitative and anecdotal evidence presents the “strong basis in evidence” that the courts require to support a race- and gender-conscious relief. Without targeted efforts to reduce discriminatory barriers, minorities and women will likely continue to face diminished opportunities because of the race or gender of the firm’s owner(s). We therefore recommend the adoption of a new Program with the following major elements.

185. Appendix C discusses the meaning and role of statistical significance.

1. Adopts Goals for a New M/WBE Program

The County should set an annual, overall target for M/WBE utilization in County contracts (prime contracts and subcontracts combined). The availability estimates in Chapter III should be the basis for consideration of overall, annual spending targets for County funds. We found the weighted availability of M/WBEs to be 28.4 percent. This can be the County's goal (or a figure rounded to a whole number) for its overall spending with certified firms across all industry categories.

In addition to setting an overall, annual target, Harris County should use the study's detailed unweighted availability estimates as the starting point for contract specific goals. As discussed in Chapter II of the study, the County's constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project. The detailed availability estimates in the study can serve as the starting point for contract goal setting. The current B2Gnow electronic contracting data collection, monitoring and notification system includes a goal setting module that the County should use as its data source. This methodology involves four steps:

- Weight the estimated dollar value of the scopes of the contract by 6-digit NAICS codes, as determined during the process of creating the solicitation. To increase understanding and compliance, these industry codes could be listed in the solicitation as a guide to how the goal was determined and where the County expects bidders to seek M/WBE participation. Good faith efforts could be defined as, among several other elements, an adequate solicitation of firms certified in these codes.
- Determine the unweighted availability of M/WBEs in those scopes as estimated in the study.
- Calculate a weighted goal based upon the scopes and the availability of firms.
- Adjust the resulting percentage based on current market conditions.

We urge the County to bid some contracts without goals that it determines have significant opportunities for M/WBE participation. These "control contracts" can illuminate whether certified firms are used or even solicited in the absence of goals. The development of some unremediated markets data, as held by the courts, will be probative of whether the M/WBE program remains needed to level the playing field for minorities and women.

2. Program Eligibility

The study found that, as a group and for each racial and ethnic group and White women, M/WBEs continue to suffer disparities in their access to County contracts. We therefore recommend that all racial and ethnic groups and White women be eligible for participation in the program on a presumptive basis. Program eligibility should be limited to firms that have a business presence in the County's market area, as established by this study, or that can demonstrate their attempts to do business within the County's market area.¹⁸⁶

The County's new program should accept M/W/DBE certifications from the Texas Unified Certification Program, the State of Texas' HUB program, and the City of Houston. It will be the County's constitutional responsibility, to ensure that the certifications it accepts are from narrowly tailored programs with demonstrated integrity.

3. Compliance and Monitoring Policies and Procedures

In addition to ensuring that the new M/WBE program sets narrowly tailored goals and eligibility requirements, it is essential that the County adopt contract award and performance standards for program compliance and monitoring that are likewise narrowly tailored and embody best practices. In general, compliance and monitoring should include the following elements:

- Clearly delineated policies and forms by which a bidder or proposer can establish that it has either met the contract goal(s) or made good faith efforts to do so.
- Rules for how participation by certified firms will be counted towards the goal(s). A firm must perform a "commercially useful function" in order to be counted for goal attainment. How various types of goods or services will be credited towards meeting goals must be clearly spelled out (for example, whether full credit will be given for purchases from certified regular dealers or suppliers). Certified prime vendors should be permitted to count their self-performance towards meeting the contract goal.
- Contract monitoring policies, procedures and data collection processes. This must include tracking the utilization of certified and non-certified subcontractors at all tiers of performance and monitoring prompt payment obligations of prime contractors to subcontractors. County staff must perform site visits to meet these requirements.

186. The County's market consists of Harris, Fort Bend, Montgomery, and Brazoria Counties.

- Criteria and processes for how non-performing, certified firms can be substituted during performance.
- Contract closeout procedures and standards for sanctions for firms that fail to meet their contractual requirements under the program.
- A process to appeal adverse determinations under the program that meets due process standards.

4. Implement a Pilot Mentor-Protégé Program

Many firms suggested the County adopt a pilot mentor-protégé program. We suggest modeling it after the successful programs approved by the U.S. Department of Transportation, that provides support for M/WBEs while incentivizing the mentor to provide the types of assistance targeted to the protégé to produce identified and achievable goals.¹⁸⁷ As also described by several interviewees, it is important that any program provide real value to both firms, not be mere window dressing or simply devolve into feel good meetings.

A program should include:

- A description of the qualifications of the mentor, including the firm’s number of years of experience as a contractor or consultant; the agreement to devote a specified number of hours per month to working with the protégé; and the qualifications of the lead individual responsible for implementing the development plan.
- A description of the qualifications of the protégé, including the firm’s number of years of experience as a contractor or consultant; the agreement to devote a specified number of hours per month to working with the mentor; and the qualifications of the M/WBE owner(s).
- A written County-approved development plan, which clearly sets forth the objectives of the parties and their respective roles, the duration of the arrangement, a schedule for meetings and development of action plans, and the services and resources to be provided by the mentor to the protégé. The assistance provided by the mentor must be detailed and directly relevant to County work. The development targets should be quantifiable and verifiable—such as increased bonding capacity, increased sales, increased areas of work specialty or prequalification—and reflect objectives that increase the protégé’s capacities and expand its business areas and expertise.

187. See 49 C.F.R Part 26, Appendix D, “Mentor-Protégé Guidelines”.

- A long term and specific commitment between the parties, *e.g.*, 12 to 36 months.
- A provision for the use of any equipment or equipment rental.
- Extra credit for the mentor's use of the protégé to meet a contract goal (*e.g.*, 1.25 percent for each dollar spent), with a limit on the total percentage that could be credited on a specific contract and on total credits available under the Plan.
- Any financial assistance by the mentor to the protégé must be subject to prior written approval by the County and must not permit the mentor to assume control of the protégé or otherwise impinge on the protégé's continued program eligibility.
- A fee schedule to cover the direct and indirect cost for services provided by the mentor for specific training and assistance to the protégé.
- A provision that the Plan may be terminated by mutual consent or by the County if the protégé no longer meets the eligibility standards for M/WBE certification; either party desires to be removed from the relationship; either party has failed or is unable to meet its obligations under the plan; the protégé is not progressing or is not likely to progress in accordance with the plan; the protégé has reached a satisfactory level of self-sufficiency to compete without the plan; or the plan or its provisions are contrary to legal requirements.
- Submission of quarterly reports by the parties indicating their progress toward each of the Plan's goals.
- Regular review by the County of compliance with the Plan and progress towards meeting its objectives. Failure to adhere to the terms of the Plan or to make satisfactory progress would be grounds for termination from the Program.

We recognize that this level of direction and oversight will require resources. Close monitoring of the program will also be critical.

5. Provide Training for all County Staff with Contracting Responsibilities or Vendor Interface

These significant changes will require a County-wide roll out of new initiatives, as well as training of all Harris County personnel with contracting responsibilities and vendor management. In addition to providing technical information on compliance, it is also an opportunity to reaffirm the County's commitment to supplier diversity and encourage all departments to buy into these values and objectives.

6. Provide Training for Vendors on the New Program

It will be important for the County to provide some formal training on these proposed new program elements. This could consist of in-person sessions, as well as web-based seminars that would answer questions such as who is eligible; how to become certified; how to meet goals or establish good faith efforts to do so; how to use the B2Gnow system; prompt payment obligations; sub-contractor substitution; and contract close out. Information should further cover resources to assist small businesses, such as loan program, accessing local Procurement Technical Assistance Centers, and other support.

C. Develop Performance Standards and Review Timetables

To meet the requirements of strict constitutional scrutiny and ensure that best practices in program administration continue to be applied, the County should conduct a full and thorough review of the evidentiary basis for a new M/WBE program approximately every five to seven years.

Harris County should adopt a sunset date for the M/WBE program, when it will end unless reauthorized. This is a constitutional requirement to meet the narrow tailoring test that race- and gender-conscious measures be used only when necessary. A new disparity study or other applicable research should be commissioned in time to meet the sunset date.

The County should develop quantitative performance measures for overall success of its race- and gender-neutral measures and any M/WBE program to evaluate the effectiveness of various approaches in reducing the systemic barriers identified by the study. In addition to meeting goals, possible benchmarks might be:

- Progress towards meeting the overall, annual M/WBE goal.
- The number of bids or proposals, industry and the dollar amount of the awards and the goal shortfall, where the bidder was unable to meet the goals and submitted good faith efforts to do so.
- The number, dollar amount and the industry code of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal.
- The number, industry and dollar amount of M/WBE substitutions during contract performance.
- Increased bidding by certified firms as prime vendors.
- Increased prime contract awards to certified firms.

- Increased “capacity” of certified firms, as measured by bonding limits, size of jobs, profitability, complexity of work, etc.
- Increased variety in the industries in which M/WBEs are awarded prime contracts and subcontracts.

APPENDIX A:

FURTHER EXPLANATION OF THE MULTIPLE REGRESSION ANALYSIS

As explained in the report, multiple regression statistical techniques seek to explore the relationship between a set of independent variables and a dependent variable. The following equation is a way to visualize this relationship:

- $DV = f(D, I, O),$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry and occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term; β_1 , β_2 and β_3 are coefficients, and μ is the random error term.

The statistical technique seeks to estimate the values of the constant term and the coefficients.

In order to complete the estimation, the set of independent variables must be operationalized. For demographic variables, the estimation used race, gender and age. For industry and occupation variables, the relevant industry and occupation were utilized. For the other variables, age and education were used.

A coefficient was estimated for each independent variable. The broad idea is that a person's wage or earnings is dependent upon the person's race, gender, age, industry, occupation, and education. Since this Report examined Harris County, the analysis was limited to data from the Houston Metropolitan Area. The coefficient for the new variable showed the impact of being a member of that race or gender in the county metropolitan area.

APPENDIX B:

FURTHER EXPLANATION OF THE PROBIT REGRESSION ANALYSIS

Probit regression is a special type of regression analysis. While there are many differences between the underlying estimation techniques used in the probit regression and the standard regression analysis, the main differences from the layperson's point of view lie in the nature of the dependent variable and the interpretation of the coefficients associated with the independent variables.

The basic model looks the same:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry and occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term; β_1 , β_2 , and β_3 are coefficients, and μ is the random error term.

In the standard regression model, the dependent variable is continuous and can take on many values. In the probit model, the dependent variable is dichotomous and can take on only two values: zero or one. For instance, in the standard regression analysis, we may be exploring the impact of a change in some independent variable on wages. In this case, the value of one's wage might be any non-negative number. In contrast, in the probit regression analysis, the exploration might be the impact of a change in some independent variable on the probability that some event occurs. For instance, the question might be how an individual's gender impacts the probability of that person forming a business. In this case, the dependent variable has two values: zero, if a business is not formed; one, if a business is formed.

The second significant difference—the interpretation of the independent variables' coefficients—is fairly straight-forward in the standard regression model: the unit change in the independent variable impacts the dependent variable

by the amount of the coefficient.¹⁸⁸ However, in the probit model, the initial coefficients cannot be interpreted this way. One additional step, which can be computed easily by most statistical packages, must be undertaken in order to yield a result that indicates how the change in the independent variable affects the probability of an event (*e.g.*, business formation) occurring. For instance, using our previous example of the impact on gender on business formation, if the independent variable was WOMAN (with a value of 0 if the individual was male and 1 if the individual was female) and the final transformation of the coefficient of WOMAN was -0.12, we would interpret this to mean that women have a 12 percent lower probability of forming a business compared to men.

188. The exact interpretation depends upon the functional form of the model.

APPENDIX C:

SIGNIFICANCE LEVELS

Many tables in this Report contain asterisks indicating that a number has statistical significance at 0.001, 0.01, or 0.05 levels (sometimes, this is presented as 99.9 percent; 99 percent and 95 percent, respectively) and the body of the report repeats these descriptions. While the use of the term seems important, it is not self-evident what the term means. This Appendix provides a general explanation of significance levels.

This Report seeks to address the question whether non-Whites and White women received disparate treatment in the economy relative to White males. From a statistical viewpoint, this primary question has two sub-questions:

- What is the relationship between the independent variable and the dependent variable?
- What is the probability that the relationship between the independent variable and the dependent variable is equal to zero?

For example, an important question facing Harris County as it explores whether each racial and ethnic group and White women continue to experience discrimination in its markets is do non-Whites and White women receive lower wages than White men? As discussed in Appendix A, one way to uncover the relationship between the dependent variable (*e.g.*, wages) and the independent variable (*e.g.*, non-Whites) is through multiple regression analysis. An example helps to explain this concept.

Let us say, for example, this analysis determines that non-Whites receive wages that are 35 percent less than White men after controlling for other factors, such as education and industry, which might account for the differences in wages. However, this finding is only an estimate of the relationship between the independent variable (*e.g.*, non-Whites) and the dependent variable (*e.g.*, wages) – the first sub-question. It is still important to determine how accurate is that estimation, that is, what is the probability the estimated relationship is equal to zero – the second sub-question.

To resolve the second sub-question, statistical hypothesis tests are utilized. Hypothesis testing assumes that there is no relationship between belonging to a particular demographic group and the level of economic utilization relative to White men (*e.g.*, non-Whites earn identical wages compared to White men or non-Whites earn 0 percent less than White men). This sometimes is called

the null hypothesis. We then calculate a confidence interval to find the probability that the observed relationship (*e.g.*, - 35 percent) is between 0 and minus that confidence interval.¹⁸⁹ The confidence interval will vary depending upon the level of confidence (statistical significance) we wish to have in our conclusion. When a number is statistically significant at the 0.001 level, this indicates that we can be 99.9 percent certain that the number in question (in this example, -35 percent) lies outside of the confidence interval. When a number is statistically significant at the 0.01 level, this indicates that we can be 99.0 percent certain that the number in question lies outside of the confidence interval. When a number is statistically significant at the 0.05 level, this indicates that we can be 95.0 percent certain that the number in question lies outside of the confidence interval.

189. Because 0 can only be greater than -35 percent, we only speak of “minus the confidence level”. This is a one-tailed hypothesis test. If, in another example, the observed relationship could be above or below the hypothesized value, then we would say “plus or minus the confidence level” and this would be a two-tailed test.

APPENDIX D:

ADDITIONAL DATA FROM THE UTILIZATION ANALYSES FOR HARRIS COUNTY CONTRACT DATA FOR THE DISPARITY STUDY

**Table D-1: Industry Percentage Distribution of Contracts by Dollars Paid
All Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	42.321212%	42.3%
237110	Water and Sewer Line and Related Structures Construction	7.752138%	50.1%
236220	Commercial and Institutional Building Construction	6.423557%	56.5%
238210	Electrical Contractors and Other Wiring Installation Contractors	5.245722%	61.7%
562111	Solid Waste Collection	4.838534%	66.6%
238110	Poured Concrete Foundation and Structure Contractors	4.201267%	70.8%
238910	Site Preparation Contractors	2.943801%	73.7%
238990	All Other Specialty Trade Contractors	2.541943%	76.3%
237990	Other Heavy and Civil Engineering Construction	2.416203%	78.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.978377%	80.7%
541330	Engineering Services	1.808690%	82.5%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	1.597361%	84.1%
541512	Computer Systems Design Services	1.004295%	85.1%
238310	Drywall and Insulation Contractors	0.832702%	85.9%
524114	Direct Health and Medical Insurance Carriers	0.736666%	86.6%
238120	Structural Steel and Precast Concrete Contractors	0.670424%	87.3%
424120	Stationery and Office Supplies Merchant Wholesalers	0.574072%	87.9%
238160	Roofing Contractors	0.510636%	88.4%
488490	Other Support Activities for Road Transportation	0.479124%	88.9%
561730	Landscaping Services	0.463627%	89.3%
238290	Other Building Equipment Contractors	0.434198%	89.8%
327320	Ready-Mix Concrete Manufacturing	0.430052%	90.2%
212312	Crushed and Broken Limestone Mining and Quarrying	0.426947%	90.6%
517919	All Other Telecommunications	0.388066%	91.0%
238390	Other Building Finishing Contractors	0.383586%	91.4%
237130	Power and Communication Line and Related Structures Construction	0.363006%	91.8%
221320	Sewage Treatment Facilities	0.331287%	92.1%
238350	Finish Carpentry Contractors	0.329893%	92.4%
811211	Consumer Electronics Repair and Maintenance	0.319287%	92.7%
561990	All Other Support Services	0.309673%	93.1%
236210	Industrial Building Construction	0.299131%	93.4%
484110	General Freight Trucking, Local	0.294973%	93.7%
561720	Janitorial Services	0.272763%	93.9%
327390	Other Concrete Product Manufacturing	0.267543%	94.2%
238140	Masonry Contractors	0.259782%	94.5%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
445110	Supermarkets and Other Grocery (except Convenience) Stores	0.255089%	94.7%
238330	Flooring Contractors	0.246615%	95.0%
238150	Glass and Glazing Contractors	0.230256%	95.2%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.218596%	95.4%
811111	General Automotive Repair	0.209495%	95.6%
561612	Security Guards and Patrol Services	0.197786%	95.8%
238320	Painting and Wall Covering Contractors	0.187912%	96.0%
541511	Custom Computer Programming Services	0.170780%	96.2%
221310	Water Supply and Irrigation Systems	0.166724%	96.3%
485111	Mixed Mode Transit Systems	0.158562%	96.5%
562910	Remediation Services	0.139413%	96.6%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	0.136606%	96.8%
722310	Food Service Contractors	0.127748%	96.9%
484121	General Freight Trucking, Long-Distance, Truckload	0.125015%	97.0%
541618	Other Management Consulting Services	0.124069%	97.1%
324121	Asphalt Paving Mixture and Block Manufacturing	0.119074%	97.3%
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	0.114618%	97.4%
484210	Used Household and Office Goods Moving	0.107027%	97.5%
562211	Hazardous Waste Treatment and Disposal	0.099675%	97.6%
561621	Security Systems Services (except Locksmiths)	0.095533%	97.7%
541310	Architectural Services	0.094000%	97.8%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	0.093591%	97.9%
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	0.092905%	98.0%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
519130	Internet Publishing and Broadcasting and Web Search Portals	0.091734%	98.1%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	0.089721%	98.1%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.083073%	98.2%
423710	Hardware Merchant Wholesalers	0.070255%	98.3%
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	0.064931%	98.4%
237120	Oil and Gas Pipeline and Related Structures Construction	0.063869%	98.4%
541370	Surveying and Mapping (except Geophysical) Services	0.063476%	98.5%
339112	Surgical and Medical Instrument Manufacturing	0.063061%	98.6%
423210	Furniture Merchant Wholesalers	0.060550%	98.6%
423130	Tire and Tube Merchant Wholesalers	0.052370%	98.7%
517311	Wired Telecommunications Carriers	0.049305%	98.7%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.049243%	98.8%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.047323%	98.8%
518210	Data Processing, Hosting, and Related Services	0.044534%	98.9%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.042338%	98.9%
238340	Tile and Terrazzo Contractors	0.041991%	98.9%
238170	Siding Contractors	0.036319%	99.0%
541519	Other Computer Related Services	0.035297%	99.0%
541380	Testing Laboratories	0.034434%	99.0%
321912	Cut Stock, Resawing Lumber, and Planing	0.032061%	99.1%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.031486%	99.1%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	0.030015%	99.1%
493190	Other Warehousing and Storage	0.028842%	99.2%
238130	Framing Contractors	0.028685%	99.2%
541611	Administrative Management and General Management Consulting Services	0.027469%	99.2%
325211	Plastics Material and Resin Manufacturing	0.026782%	99.3%
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	0.026781%	99.3%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0.025845%	99.3%
333314	Optical Instrument and Lens Manufacturing	0.025726%	99.3%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	0.024296%	99.4%
332913	Plumbing Fixture Fitting and Trim Manufacturing	0.023931%	99.4%
523110	Investment Banking and Securities Dealing	0.023580%	99.4%
451110	Sporting Goods Stores	0.023412%	99.4%
624221	Temporary Shelters	0.021872%	99.4%
541430	Graphic Design Services	0.020737%	99.5%
334519	Other Measuring and Controlling Device Manufacturing	0.020243%	99.5%
561320	Temporary Help Services	0.019190%	99.5%
339950	Sign Manufacturing	0.018443%	99.5%
339920	Sporting and Athletic Goods Manufacturing	0.018063%	99.5%
541940	Veterinary Services	0.017763%	99.6%
423390	Other Construction Material Merchant Wholesalers	0.016767%	99.6%
327332	Concrete Pipe Manufacturing	0.016125%	99.6%
562112	Hazardous Waste Collection	0.015896%	99.6%
562991	Septic Tank and Related Services	0.015769%	99.6%

Harris County Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
423410	Photographic Equipment and Supplies Merchant Wholesalers	0.015317%	99.6%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.015136%	99.7%
541110	Offices of Lawyers	0.015133%	99.7%
336611	Ship Building and Repairing	0.014558%	99.7%
562212	Solid Waste Landfill	0.014110%	99.7%
336211	Motor Vehicle Body Manufacturing	0.014084%	99.7%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	0.013911%	99.7%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.013218%	99.7%
442110	Furniture Stores	0.012383%	99.8%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	0.011681%	99.8%
541513	Computer Facilities Management Services	0.011532%	99.8%
488190	Other Support Activities for Air Transportation	0.011426%	99.8%
332323	Ornamental and Architectural Metal Work Manufacturing	0.010888%	99.8%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	0.010309%	99.8%
321911	Wood Window and Door Manufacturing	0.010064%	99.8%
541620	Environmental Consulting Services	0.009777%	99.8%
551112	Offices of Other Holding Companies	0.009002%	99.8%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.008945%	99.8%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.008161%	99.9%
623220	Residential Mental Health and Substance Abuse Facilities	0.008123%	99.9%
561790	Other Services to Buildings and Dwellings	0.007656%	99.9%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.007518%	99.9%
562998	All Other Miscellaneous Waste Management Services	0.007485%	99.9%
326212	Tire Retreading	0.006524%	99.9%
333997	Scale and Balance Manufacturing	0.005992%	99.9%
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	0.005833%	99.9%
622110	General Medical and Surgical Hospitals	0.005743%	99.9%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	0.005522%	99.9%
541690	Other Scientific and Technical Consulting Services	0.004947%	99.9%
541191	Title Abstract and Settlement Offices	0.004566%	99.9%
524210	Insurance Agencies and Brokerages	0.004415%	99.9%
541320	Landscape Architectural Services	0.004270%	99.9%
333318	Other Commercial and Service Industry Machinery Manufacturing	0.004232%	99.9%
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	0.004146%	99.9%
541820	Public Relations Agencies	0.003966%	99.9%
488410	Motor Vehicle Towing	0.003427%	99.9%
333120	Construction Machinery Manufacturing	0.003382%	100.0%
325991	Custom Compounding of Purchased Resins	0.003197%	100.0%
541990	All Other Professional, Scientific, and Technical Services	0.003151%	100.0%
444130	Hardware Stores	0.003040%	100.0%
423420	Office Equipment Merchant Wholesalers	0.002767%	100.0%
524126	Direct Property and Casualty Insurance Carriers	0.002265%	100.0%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
532284	Recreational Goods Rental	0.002250%	100.0%
339940	Office Supplies (except Paper) Manufacturing	0.002183%	100.0%
541922	Commercial Photography	0.002168%	100.0%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0.002081%	100.0%
212399	All Other Nonmetallic Mineral Mining	0.001964%	100.0%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.001567%	100.0%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	0.001525%	100.0%
424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	0.001277%	100.0%
561710	Exterminating and Pest Control Services	0.001234%	100.0%
423840	Industrial Supplies Merchant Wholesalers	0.001228%	100.0%
541810	Advertising Agencies	0.001226%	100.0%
331222	Steel Wire Drawing	0.001059%	100.0%
926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors	0.000977%	100.0%
332710	Machine Shops	0.000971%	100.0%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	0.000941%	100.0%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	0.000924%	100.0%
423930	Recyclable Material Merchant Wholesalers	0.000850%	100.0%
333992	Welding and Soldering Equipment Manufacturing	0.000715%	100.0%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.000679%	100.0%
531312	Nonresidential Property Managers	0.000599%	100.0%
561499	All Other Business Support Services	0.000563%	100.0%
339999	All Other Miscellaneous Manufacturing	0.000555%	100.0%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
811121	Automotive Body, Paint, and Interior Repair and Maintenance	0.000530%	100.0%
332618	Other Fabricated Wire Product Manufacturing	0.000498%	100.0%
532289	All Other Consumer Goods Rental	0.000493%	100.0%
524291	Claims Adjusting	0.000483%	100.0%
314999	All Other Miscellaneous Textile Product Mills	0.000433%	100.0%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.000399%	100.0%
331529	Other Nonferrous Metal Foundries (except Die-Casting)	0.000381%	100.0%
444190	Other Building Material Dealers	0.000325%	100.0%
327120	Clay Building Material and Refractories Manufacturing	0.000308%	100.0%
813920	Professional Organizations	0.000305%	100.0%
424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	0.000305%	100.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	0.000190%	100.0%
323111	Commercial Printing (except Screen and Books)	0.000145%	100.0%
811219	Other Electronic and Precision Equipment Repair and Maintenance	0.000111%	100.0%
339991	Gasket, Packing, and Sealing Device Manufacturing	0.000082%	100.0%
561439	Other Business Service Centers (including Copy Shops)	0.000066%	100.0%
443142	Electronics Stores	0.000062%	100.0%
541720	Research and Development in the Social Sciences and Humanities	0.000059%	100.0%
424710	Petroleum Bulk Stations and Terminals	0.000056%	100.0%
454390	Other Direct Selling Establishments	0.000055%	100.0%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.000031%	100.0%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541340	Drafting Services	0.000028%	100.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.000027%	100.0%
541211	Offices of Certified Public Accountants	0.000019%	100.0%
335313	Switchgear and Switchboard Apparatus Manufacturing	0.000014%	100.0%
444110	Home Centers	0.000013%	100.0%
332912	Fluid Power Valve and Hose Fitting Manufacturing	0.000006%	100.0%
492110	Couriers and Express Delivery Services	0.000003%	100.0%
TOTAL			100.0%

Source: CHA analysis of Harris County data.

**Table D-2: Industry Percentage Distribution of Contracts by Dollars Paid
Prime Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	52.2104%	52.2%
237110	Water and Sewer Line and Related Structures Construction	9.1545%	61.4%
236220	Commercial and Institutional Building Construction	8.1750%	69.5%
562111	Solid Waste Collection	6.2217%	75.8%
237990	Other Heavy and Civil Engineering Construction	2.7511%	78.5%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	2.0531%	80.6%
238210	Electrical Contractors and Other Wiring Installation Contractors	1.7537%	82.3%
238110	Poured Concrete Foundation and Structure Contractors	1.7464%	84.1%
238990	All Other Specialty Trade Contractors	1.6896%	85.8%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541330	Engineering Services	1.5353%	87.3%
541512	Computer Systems Design Services	1.2897%	88.6%
238910	Site Preparation Contractors	1.0054%	89.6%
524114	Direct Health and Medical Insurance Carriers	0.9475%	90.5%
424120	Stationery and Office Supplies Merchant Wholesalers	0.7287%	91.3%
488490	Other Support Activities for Road Transportation	0.5542%	91.8%
517919	All Other Telecommunications	0.4957%	92.3%
238220	Plumbing, Heating, and Air-Conditioning Contractors	0.4152%	92.7%
811211	Consumer Electronics Repair and Maintenance	0.4107%	93.1%
236210	Industrial Building Construction	0.3775%	93.5%
221320	Sewage Treatment Facilities	0.3772%	93.9%
238160	Roofing Contractors	0.3637%	94.3%
561720	Janitorial Services	0.3490%	94.6%
445110	Supermarkets and Other Grocery (except Convenience) Stores	0.3281%	94.9%
238310	Drywall and Insulation Contractors	0.2890%	95.2%
238290	Other Building Equipment Contractors	0.2818%	95.5%
811111	General Automotive Repair	0.2694%	95.8%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.2661%	96.0%
561612	Security Guards and Patrol Services	0.2277%	96.3%
541511	Custom Computer Programming Services	0.2196%	96.5%
485111	Mixed Mode Transit Systems	0.2039%	96.7%
221310	Water Supply and Irrigation Systems	0.1968%	96.9%
561730	Landscaping Services	0.1914%	97.1%
722310	Food Service Contractors	0.1643%	97.2%
238390	Other Building Finishing Contractors	0.1598%	97.4%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
484210	Used Household and Office Goods Moving	0.1377%	97.5%
562910	Remediation Services	0.1254%	97.7%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	0.1204%	97.8%
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	0.1191%	97.9%
519130	Internet Publishing and Broadcasting and Web Search Portals	0.1180%	98.0%
561621	Security Systems Services (except Locksmiths)	0.1176%	98.1%
541618	Other Management Consulting Services	0.1172%	98.3%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	0.1154%	98.4%
324121	Asphalt Paving Mixture and Block Manufacturing	0.1141%	98.5%
238330	Flooring Contractors	0.1130%	98.6%
541310	Architectural Services	0.1069%	98.7%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.1067%	98.8%
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	0.0835%	98.9%
339112	Surgical and Medical Instrument Manufacturing	0.0811%	99.0%
423210	Furniture Merchant Wholesalers	0.0779%	99.1%
423130	Tire and Tube Merchant Wholesalers	0.0674%	99.1%
517311	Wired Telecommunications Carriers	0.0634%	99.2%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.0542%	99.2%
237130	Power and Communication Line and Related Structures Construction	0.0477%	99.3%
493190	Other Warehousing and Storage	0.0371%	99.3%
238320	Painting and Wall Covering Contractors	0.0362%	99.4%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	0.0344%	99.4%
333314	Optical Instrument and Lens Manufacturing	0.0331%	99.4%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	0.0312%	99.5%
451110	Sporting Goods Stores	0.0301%	99.5%
624221	Temporary Shelters	0.0281%	99.5%
334519	Other Measuring and Controlling Device Manufacturing	0.0260%	99.5%
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	0.0259%	99.6%
541940	Veterinary Services	0.0228%	99.6%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0.0216%	99.6%
562112	Hazardous Waste Collection	0.0204%	99.6%
423390	Other Construction Material Merchant Wholesalers	0.0202%	99.7%
423410	Photographic Equipment and Supplies Merchant Wholesalers	0.0197%	99.7%
541110	Offices of Lawyers	0.0190%	99.7%
336611	Ship Building and Repairing	0.0186%	99.7%
336211	Motor Vehicle Body Manufacturing	0.0181%	99.7%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.0170%	99.7%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	0.0167%	99.8%
541519	Other Computer Related Services	0.0166%	99.8%
442110	Furniture Stores	0.0159%	99.8%
339920	Sporting and Athletic Goods Manufacturing	0.0157%	99.8%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	0.0150%	99.8%
541513	Computer Facilities Management Services	0.0148%	99.8%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
488190	Other Support Activities for Air Transportation	0.0147%	99.9%
562212	Solid Waste Landfill	0.0146%	99.9%
541611	Administrative Management and General Management Consulting Services	0.0140%	99.9%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	0.0133%	99.9%
623220	Residential Mental Health and Substance Abuse Facilities	0.0104%	99.9%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.0093%	99.9%
333997	Scale and Balance Manufacturing	0.0077%	99.9%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.0077%	99.9%
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	0.0075%	99.9%
622110	General Medical and Surgical Hospitals	0.0074%	100.0%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	0.0071%	100.0%
339950	Sign Manufacturing	0.0059%	100.0%
541191	Title Abstract and Settlement Offices	0.0059%	100.0%
524210	Insurance Agencies and Brokerages	0.0057%	100.0%
333318	Other Commercial and Service Industry Machinery Manufacturing	0.0054%	100.0%
541620	Environmental Consulting Services	0.0052%	100.0%
541820	Public Relations Agencies	0.0051%	100.0%
488410	Motor Vehicle Towing	0.0044%	100.0%
327320	Ready-Mix Concrete Manufacturing	0.0027%	100.0%
541810	Advertising Agencies	0.0016%	100.0%
327332	Concrete Pipe Manufacturing	0.0003%	100.0%
TOTAL			100.0%

Source: CHA analysis of Harris County data.

**Table D-3: Industry Percentage Distribution of Contracts by Dollars Paid
Subcontracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238210	Electrical Contractors and Other Wiring Installation Contractors	17.44906%	17.4%
238110	Poured Concrete Foundation and Structure Contractors	12.78014%	30.2%
238910	Site Preparation Contractors	9.71785%	39.9%
237310	Highway, Street, and Bridge Construction	7.76235%	47.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	7.44120%	55.2%
238990	All Other Specialty Trade Contractors	5.52058%	60.7%
238120	Structural Steel and Precast Concrete Contractors	3.01330%	63.7%
237110	Water and Sewer Line and Related Structures Construction	2.85158%	66.5%
541330	Engineering Services	2.76408%	69.3%
238310	Drywall and Insulation Contractors	2.73264%	72.0%
327320	Ready-Mix Concrete Manufacturing	1.92340%	74.0%
212312	Crushed and Broken Limestone Mining and Quarrying	1.91896%	75.9%
238350	Finish Carpentry Contractors	1.48274%	77.4%
237130	Power and Communication Line and Related Structures Construction	1.46476%	78.8%
561730	Landscaping Services	1.41505%	80.2%
561990	All Other Support Services	1.39186%	81.6%
484110	General Freight Trucking, Local	1.32579%	83.0%
237990	Other Heavy and Civil Engineering Construction	1.24571%	84.2%
327390	Other Concrete Product Manufacturing	1.20250%	85.4%
238140	Masonry Contractors	1.16762%	86.6%
238390	Other Building Finishing Contractors	1.16580%	87.7%
238150	Glass and Glazing Contractors	1.03491%	88.8%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238160	Roofing Contractors	1.02427%	89.8%
238290	Other Building Equipment Contractors	0.96674%	90.8%
238320	Painting and Wall Covering Contractors	0.71793%	91.5%
238330	Flooring Contractors	0.71342%	92.2%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	0.61399%	92.8%
484121	General Freight Trucking, Long-Distance, Truckload	0.56190%	93.4%
562211	Hazardous Waste Treatment and Disposal	0.44800%	93.8%
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	0.42476%	94.2%
423710	Hardware Merchant Wholesalers	0.31577%	94.6%
236220	Commercial and Institutional Building Construction	0.30303%	94.9%
237120	Oil and Gas Pipeline and Related Structures Construction	0.28707%	95.1%
541370	Surveying and Mapping (except Geophysical) Services	0.28530%	95.4%
488490	Other Support Activities for Road Transportation	0.21688%	95.7%
484220	Specialized Freight (except Used Goods) Trucking, Local	0.21270%	95.9%
518210	Data Processing, Hosting, and Related Services	0.20016%	96.1%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.19441%	96.3%
238340	Tile and Terrazzo Contractors	0.18873%	96.4%
562910	Remediation Services	0.18839%	96.6%
221320	Sewage Treatment Facilities	0.17074%	96.8%
238170	Siding Contractors	0.16324%	97.0%
541380	Testing Laboratories	0.15477%	97.1%
541618	Other Management Consulting Services	0.14794%	97.3%
321912	Cut Stock, Resawing Lumber, and Planing	0.14410%	97.4%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.14152%	97.6%
324121	Asphalt Paving Mixture and Block Manufacturing	0.13634%	97.7%
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	0.13490%	97.8%
238130	Framing Contractors	0.12893%	98.0%
325211	Plastics Material and Resin Manufacturing	0.12037%	98.1%
332913	Plumbing Fixture Fitting and Trim Manufacturing	0.10756%	98.2%
523110	Investment Banking and Securities Dealing	0.10598%	98.3%
541519	Other Computer Related Services	0.10055%	98.4%
561612	Security Guards and Patrol Services	0.09339%	98.5%
541430	Graphic Design Services	0.09321%	98.6%
561320	Temporary Help Services	0.08625%	98.7%
541611	Administrative Management and General Management Consulting Services	0.07438%	98.7%
327332	Concrete Pipe Manufacturing	0.07140%	98.8%
562991	Septic Tank and Related Services	0.07088%	98.9%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.06803%	98.9%
339950	Sign Manufacturing	0.06234%	99.0%
221310	Water Supply and Irrigation Systems	0.06179%	99.1%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.05246%	99.1%
541310	Architectural Services	0.04906%	99.2%
332323	Ornamental and Architectural Metal Work Manufacturing	0.04894%	99.2%
321911	Wood Window and Door Manufacturing	0.04523%	99.3%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0.04068%	99.3%
551112	Offices of Other Holding Companies	0.04046%	99.4%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.03668%	99.4%
561790	Other Services to Buildings and Dwellings	0.03441%	99.4%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.03379%	99.5%
424120	Stationery and Office Supplies Merchant Wholesalers	0.03366%	99.5%
562998	All Other Miscellaneous Waste Management Services	0.03364%	99.5%
326212	Tire Retreading	0.02932%	99.6%
339920	Sporting and Athletic Goods Manufacturing	0.02619%	99.6%
541620	Environmental Consulting Services	0.02594%	99.6%
236210	Industrial Building Construction	0.02524%	99.6%
541690	Other Scientific and Technical Consulting Services	0.02224%	99.7%
541320	Landscape Architectural Services	0.01919%	99.7%
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	0.01864%	99.7%
561621	Security Systems Services (except Locksmiths)	0.01828%	99.7%
333120	Construction Machinery Manufacturing	0.01520%	99.7%
325991	Custom Compounding of Purchased Resins	0.01437%	99.7%
541990	All Other Professional, Scientific, and Technical Services	0.01416%	99.8%
444130	Hardware Stores	0.01366%	99.8%
423420	Office Equipment Merchant Wholesalers	0.01243%	99.8%
562212	Solid Waste Landfill	0.01240%	99.8%
517919	All Other Telecommunications	0.01209%	99.8%
524126	Direct Property and Casualty Insurance Carriers	0.01018%	99.8%
532284	Recreational Goods Rental	0.01011%	99.8%
339940	Office Supplies (except Paper) Manufacturing	0.00981%	99.8%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541922	Commercial Photography	0.00974%	99.8%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0.00935%	99.9%
212399	All Other Nonmetallic Mineral Mining	0.00883%	99.9%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.00757%	99.9%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.00704%	99.9%
541512	Computer Systems Design Services	0.00692%	99.9%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	0.00685%	99.9%
561720	Janitorial Services	0.00621%	99.9%
424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	0.00574%	99.9%
561710	Exterminating and Pest Control Services	0.00555%	99.9%
423840	Industrial Supplies Merchant Wholesalers	0.00552%	99.9%
562111	Solid Waste Collection	0.00496%	99.9%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.00488%	99.9%
331222	Steel Wire Drawing	0.00476%	99.9%
423390	Other Construction Material Merchant Wholesalers	0.00464%	99.9%
926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors	0.00439%	99.9%
332710	Machine Shops	0.00436%	99.9%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	0.00423%	99.9%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	0.00415%	99.9%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	0.00410%	100.0%
423930	Recyclable Material Merchant Wholesalers	0.00382%	100.0%

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NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
333992	Welding and Soldering Equipment Manufacturing	0.00321%	100.0%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.00305%	100.0%
531312	Nonresidential Property Managers	0.00269%	100.0%
561499	All Other Business Support Services	0.00253%	100.0%
339999	All Other Miscellaneous Manufacturing	0.00249%	100.0%
811121	Automotive Body, Paint, and Interior Repair and Maintenance	0.00238%	100.0%
332618	Other Fabricated Wire Product Manufacturing	0.00224%	100.0%
532289	All Other Consumer Goods Rental	0.00222%	100.0%
524291	Claims Adjusting	0.00217%	100.0%
314999	All Other Miscellaneous Textile Product Mills	0.00195%	100.0%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.00179%	100.0%
331529	Other Nonferrous Metal Foundries (except Die-Casting)	0.00171%	100.0%
541110	Offices of Lawyers	0.00171%	100.0%
444190	Other Building Material Dealers	0.00146%	100.0%
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	0.00145%	100.0%
327120	Clay Building Material and Refractories Manufacturing	0.00138%	100.0%
813920	Professional Organizations	0.00137%	100.0%
424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	0.00137%	100.0%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.00100%	100.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	0.00085%	100.0%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.00066%	100.0%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
323111	Commercial Printing (except Screen and Books)	0.00065%	100.0%
811219	Other Electronic and Precision Equipment Repair and Maintenance	0.00050%	100.0%
339991	Gasket, Packing, and Sealing Device Manufacturing	0.00037%	100.0%
561439	Other Business Service Centers (including Copy Shops)	0.00030%	100.0%
336611	Ship Building and Repairing	0.00029%	100.0%
443142	Electronics Stores	0.00028%	100.0%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	0.00028%	100.0%
541720	Research and Development in the Social Sciences and Humanities	0.00026%	100.0%
424710	Petroleum Bulk Stations and Terminals	0.00025%	100.0%
454390	Other Direct Selling Establishments	0.00025%	100.0%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	0.00017%	100.0%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.00014%	100.0%
541340	Drafting Services	0.00013%	100.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.00012%	100.0%
541211	Offices of Certified Public Accountants	0.00009%	100.0%
335313	Switchgear and Switchboard Apparatus Manufacturing	0.00006%	100.0%
444110	Home Centers	0.00006%	100.0%
332912	Fluid Power Valve and Hose Fitting Manufacturing	0.00003%	100.0%
492110	Couriers and Express Delivery Services	0.00001%	100.0%
TOTAL			100.0%

Source: CHA analysis of Harris County data.

**Table D-4: Unweighted Availability for All NAICS Codes
in the Harris County Final Contract Data File**

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
212312	Crushed and Broken Limestone Mining and Quarrying	0.0%	7.1%	0.0%	0.0%	0.0%	7.1%	92.9%	100.0%
212399	All Other Nonmetallic Mineral Mining	12.5%	0.0%	0.0%	0.0%	0.0%	12.5%	87.5%	100.0%
221310	Water Supply and Irrigation Systems	0.4%	0.6%	0.0%	0.0%	1.6%	2.6%	97.4%	100.0%
221320	Sewage Treatment Facilities	0.0%	32.6%	0.0%	0.0%	2.3%	34.9%	65.1%	100.0%
236210	Industrial Building Construction	7.0%	10.8%	1.6%	0.5%	3.8%	23.7%	76.3%	100.0%
236220	Commercial and Institutional Building Construction	10.6%	6.4%	3.9%	0.5%	7.1%	28.6%	71.4%	100.0%
237110	Water and Sewer Line and Related Structures Construction	5.0%	8.7%	1.6%	0.2%	6.4%	21.9%	78.1%	100.0%
237120	Oil and Gas Pipeline and Related Structures Construction	2.1%	1.8%	0.7%	0.4%	2.8%	7.8%	92.2%	100.0%
237130	Power and Communication Line and Related Structures Construction	8.0%	17.7%	3.5%	0.0%	11.5%	40.7%	59.3%	100.0%
237310	Highway, Street, and Bridge Construction	8.3%	14.8%	3.6%	0.6%	6.7%	33.9%	66.1%	100.0%
237990	Other Heavy and Civil Engineering Construction	2.0%	4.3%	0.3%	0.0%	8.1%	14.7%	85.3%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
238110	Poured Concrete Foundation and Structure Contractors	4.9%	9.6%	1.3%	0.0%	3.7%	19.5%	80.5%	100.0%
238120	Structural Steel and Precast Concrete Contractors	5.2%	20.2%	7.3%	0.0%	14.0%	46.6%	53.4%	100.0%
238130	Framing Contractors	2.7%	3.1%	0.8%	0.0%	2.6%	9.2%	90.8%	100.0%
238140	Masonry Contractors	1.4%	5.2%	0.7%	0.0%	4.9%	12.2%	87.8%	100.0%
238150	Glass and Glazing Contractors	0.5%	8.1%	1.1%	1.6%	3.8%	15.1%	84.9%	100.0%
238160	Roofing Contractors	1.9%	3.7%	0.2%	0.0%	3.2%	9.0%	91.0%	100.0%
238170	Siding Contractors	2.4%	9.8%	2.4%	0.0%	2.4%	17.1%	82.9%	100.0%
238190	Other Foundation, Structure, and Building Exterior Contractors	9.2%	9.2%	0.0%	0.0%	2.6%	21.1%	78.9%	100.0%
238210	Electrical Contractors and Other Wiring Installation Contractors	2.6%	5.0%	1.0%	0.1%	4.4%	13.1%	86.9%	100.0%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.7%	1.9%	0.2%	0.0%	2.9%	6.8%	93.2%	100.0%
238290	Other Building Equipment Contractors	4.8%	3.8%	1.9%	0.0%	13.5%	24.0%	76.0%	100.0%
238310	Drywall and Insulation Contractors	6.6%	7.4%	0.9%	0.1%	4.7%	19.7%	80.3%	100.0%
238320	Painting and Wall Covering Contractors	3.8%	3.7%	0.3%	0.1%	2.9%	10.7%	89.3%	100.0%
238330	Flooring Contractors	8.2%	11.1%	1.5%	0.0%	6.4%	27.2%	72.8%	100.0%
238340	Tile and Terrazzo Contractors	0.5%	2.2%	0.5%	0.0%	3.6%	6.8%	93.2%	100.0%
238350	Finish Carpentry Contractors	3.0%	8.1%	1.9%	0.0%	3.3%	16.3%	83.7%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
238390	Other Building Finishing Contractors	2.1%	3.2%	0.4%	0.0%	4.9%	10.6%	89.4%	100.0%
238910	Site Preparation Contractors	10.0%	12.6%	1.3%	0.2%	9.6%	33.6%	66.4%	100.0%
238990	All Other Specialty Trade Contractors	2.3%	2.5%	0.5%	0.1%	4.6%	9.9%	90.1%	100.0%
314999	All Other Miscellaneous Textile Product Mills	0.3%	0.7%	0.7%	0.0%	15.7%	17.3%	82.7%	100.0%
321911	Wood Window and Door Manufacturing	0.0%	0.0%	0.0%	0.0%	3.8%	3.8%	96.2%	100.0%
321912	Cut Stock, Resawing Lumber, and Planing	0.0%	4.3%	0.0%	0.0%	8.7%	13.0%	87.0%	100.0%
323111	Commercial Printing (except Screen and Books)	1.2%	1.6%	2.3%	0.2%	7.7%	13.0%	87.0%	100.0%
324121	Asphalt Paving Mixture and Block Manufacturing	6.9%	10.3%	3.4%	0.0%	0.0%	20.7%	79.3%	100.0%
325211	Plastics Material and Resin Manufacturing	0.5%	0.0%	0.5%	0.0%	2.6%	3.7%	96.3%	100.0%
325991	Custom Compounding of Purchased Resins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
326212	Tire Retreading	0.0%	33.3%	0.0%	0.0%	0.0%	33.3%	66.7%	100.0%
327120	Clay Building Material and Refractories Manufacturing	0.0%	3.4%	3.4%	0.0%	3.4%	10.3%	89.7%	100.0%
327320	Ready-Mix Concrete Manufacturing	1.4%	1.4%	2.1%	0.0%	2.1%	6.9%	93.1%	100.0%
327332	Concrete Pipe Manufacturing	8.3%	0.0%	0.0%	0.0%	0.0%	8.3%	91.7%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
327390	Other Concrete Product Manufacturing	0.0%	1.1%	0.0%	1.1%	4.3%	6.5%	93.5%	100.0%
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	0.0%	4.2%	8.3%	0.0%	0.0%	12.5%	87.5%	100.0%
331222	Steel Wire Drawing	0.0%	11.5%	0.0%	0.0%	11.5%	23.1%	76.9%	100.0%
331529	Other Nonferrous Metal Foundries (except Die-Casting)	0.0%	6.3%	0.0%	0.0%	0.0%	6.3%	93.8%	100.0%
332323	Ornamental and Architectural Metal Work Manufacturing	0.0%	3.3%	1.1%	0.0%	5.6%	10.0%	90.0%	100.0%
332618	Other Fabricated Wire Product Manufacturing	0.0%	0.0%	0.0%	0.0%	5.7%	5.7%	94.3%	100.0%
332710	Machine Shops	0.5%	3.5%	1.9%	0.3%	6.9%	13.1%	86.9%	100.0%
332912	Fluid Power Valve and Hose Fitting Manufacturing	0.0%	0.0%	0.0%	0.0%	9.1%	9.1%	90.9%	100.0%
332913	Plumbing Fixture Fitting and Trim Manufacturing	0.0%	0.0%	0.0%	0.0%	13.3%	13.3%	86.7%	100.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	2.1%	3.1%	2.1%	1.0%	4.2%	12.5%	87.5%	100.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	3.3%	5.5%	1.1%	0.0%	11.0%	20.9%	79.1%	100.0%
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	0.0%	10.0%	0.0%	0.0%	0.0%	10.0%	90.0%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
333120	Construction Machinery Manufacturing	0.0%	1.8%	0.9%	0.9%	1.8%	5.5%	94.5%	100.0%
333314	Optical Instrument and Lens Manufacturing	0.0%	0.0%	0.0%	0.0%	6.7%	6.7%	93.3%	100.0%
333318	Other Commercial and Service Industry Machinery Manufacturing	0.7%	0.7%	0.7%	0.0%	4.8%	6.9%	93.1%	100.0%
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	0.0%	0.0%	0.0%	0.0%	7.4%	7.4%	92.6%	100.0%
333992	Welding and Soldering Equipment Manufacturing	5.6%	0.0%	11.1%	0.0%	5.6%	22.2%	77.8%	100.0%
333997	Scale and Balance Manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	0.0%	0.0%	0.0%	1.4%	4.3%	5.7%	94.3%	100.0%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	0.6%	4.1%	3.5%	0.0%	5.3%	13.5%	86.5%	100.0%
334519	Other Measuring and Controlling Device Manufacturing	0.8%	2.5%	1.7%	0.0%	4.1%	9.1%	90.9%	100.0%
335313	Switchgear and Switchboard Apparatus Manufacturing	8.8%	11.8%	0.0%	0.0%	8.8%	29.4%	70.6%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
336211	Motor Vehicle Body Manufacturing	0.0%	3.3%	0.0%	0.0%	13.3%	16.7%	83.3%	100.0%
336611	Ship Building and Repairing	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	93.0%	100.0%
339112	Surgical and Medical Instrument Manufacturing	0.0%	2.8%	2.8%	0.9%	2.8%	9.4%	90.6%	100.0%
339920	Sporting and Athletic Goods Manufacturing	0.7%	1.4%	1.4%	1.4%	6.2%	11.0%	89.0%	100.0%
339940	Office Supplies (except Paper) Manufacturing	2.6%	5.3%	0.0%	0.0%	28.9%	36.8%	63.2%	100.0%
339950	Sign Manufacturing	0.5%	2.2%	2.9%	0.0%	9.6%	15.2%	84.8%	100.0%
339991	Gasket, Packing, and Sealing Device Manufacturing	0.0%	3.9%	1.3%	0.0%	6.5%	11.7%	88.3%	100.0%
339999	All Other Miscellaneous Manufacturing	0.7%	0.3%	0.2%	0.0%	3.2%	4.3%	95.7%	100.0%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	0.0%	1.0%	0.0%	0.0%	2.4%	3.3%	96.7%	100.0%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	0.9%	2.1%	0.3%	0.3%	6.0%	9.5%	90.5%	100.0%
423130	Tire and Tube Merchant Wholesalers	2.1%	2.1%	2.1%	0.0%	3.1%	9.4%	90.6%	100.0%
423210	Furniture Merchant Wholesalers	1.6%	2.9%	2.0%	0.4%	12.7%	19.6%	80.4%	100.0%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	0.2%	1.2%	0.2%	0.2%	4.1%	5.9%	94.1%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	1.7%	3.7%	2.0%	0.3%	5.6%	13.3%	86.7%	100.0%
423390	Other Construction Material Merchant Wholesalers	4.9%	2.4%	1.2%	1.2%	8.5%	18.3%	81.7%	100.0%
423410	Photographic Equipment and Supplies Merchant Wholesalers	5.3%	5.3%	5.3%	0.0%	21.1%	36.8%	63.2%	100.0%
423420	Office Equipment Merchant Wholesalers	1.3%	3.3%	2.6%	0.0%	7.8%	15.0%	85.0%	100.0%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	4.0%	2.4%	5.9%	0.3%	11.3%	23.9%	76.1%	100.0%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	6.7%	3.3%	4.1%	0.4%	8.3%	22.8%	77.2%	100.0%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	2.5%	0.8%	3.3%	0.8%	9.1%	16.5%	83.5%	100.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	0.6%	1.7%	1.1%	0.4%	4.5%	8.2%	91.8%	100.0%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	2.5%	3.3%	1.6%	0.5%	9.2%	17.1%	82.9%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	0.0%	0.0%	4.3%	0.0%	8.5%	12.8%	87.2%	100.0%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0.8%	1.5%	2.6%	0.0%	7.7%	12.5%	87.5%	100.0%
423710	Hardware Merchant Wholesalers	0.0%	2.4%	1.4%	0.0%	12.6%	16.4%	83.6%	100.0%
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	1.0%	1.4%	2.9%	1.0%	5.3%	11.5%	88.5%	100.0%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.0%	0.0%	0.0%	0.0%	12.3%	12.3%	87.7%	100.0%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.0%	1.0%	0.0%	0.0%	14.6%	15.6%	84.4%	100.0%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.8%	1.8%	1.0%	0.0%	4.7%	8.3%	91.7%	100.0%
423840	Industrial Supplies Merchant Wholesalers	1.2%	1.9%	1.1%	0.2%	6.7%	11.1%	88.9%	100.0%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	4.0%	1.7%	0.5%	0.2%	9.4%	15.8%	84.2%	100.0%
423930	Recyclable Material Merchant Wholesalers	2.3%	0.5%	1.8%	0.0%	6.4%	10.9%	89.1%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	1.4%	0.9%	0.5%	0.0%	4.1%	6.9%	93.1%	100.0%
424120	Stationery and Office Supplies Merchant Wholesalers	5.4%	3.8%	6.5%	1.6%	14.5%	31.7%	68.3%	100.0%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	2.1%	0.3%	0.7%	0.0%	8.0%	11.2%	88.8%	100.0%
424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	0.0%	2.6%	1.3%	0.0%	7.8%	11.7%	88.3%	100.0%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	0.0%	4.5%	0.9%	0.0%	4.5%	9.9%	90.1%	100.0%
424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	0.0%	1.5%	4.4%	0.0%	5.8%	11.7%	88.3%	100.0%
424710	Petroleum Bulk Stations and Terminals	1.3%	1.3%	2.5%	0.0%	2.5%	7.6%	92.4%	100.0%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	1.2%	1.3%	0.8%	0.0%	3.8%	7.1%	92.9%	100.0%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.0%	1.6%	1.6%	0.0%	7.0%	10.2%	89.8%	100.0%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	0.6%	0.4%	0.4%	0.0%	2.3%	3.7%	96.3%	100.0%
442110	Furniture Stores	0.5%	0.9%	0.3%	0.1%	5.1%	6.8%	93.2%	100.0%
443142	Electronics Stores	1.0%	0.4%	1.4%	0.1%	3.5%	6.3%	93.7%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
444110	Home Centers	0.2%	0.9%	0.0%	0.0%	2.6%	3.6%	96.4%	100.0%
444130	Hardware Stores	1.1%	1.9%	0.5%	0.0%	4.0%	7.4%	92.6%	100.0%
444190	Other Building Material Dealers	0.7%	1.5%	1.6%	0.3%	3.4%	7.5%	92.5%	100.0%
445110	Supermarkets and Other Grocery (except Convenience) Stores	0.1%	0.1%	0.1%	0.0%	3.2%	3.5%	96.5%	100.0%
451110	Sporting Goods Stores	0.3%	0.3%	0.2%	0.0%	3.3%	4.0%	96.0%	100.0%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.6%	0.3%	0.2%	0.0%	3.5%	4.6%	95.4%	100.0%
454390	Other Direct Selling Establishments	0.5%	0.3%	0.4%	0.0%	6.7%	8.0%	92.0%	100.0%
484110	General Freight Trucking, Local	1.7%	1.4%	0.1%	0.1%	2.1%	5.4%	94.6%	100.0%
484121	General Freight Trucking, Long-Distance, Truckload	4.1%	1.4%	0.5%	0.1%	4.8%	10.9%	89.1%	100.0%
484210	Used Household and Office Goods Moving	4.3%	0.5%	0.5%	0.5%	8.2%	14.0%	86.0%	100.0%
484220	Specialized Freight (except Used Goods) Trucking, Local	7.9%	30.5%	0.4%	1.1%	7.9%	47.7%	52.3%	100.0%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	4.9%	4.1%	1.6%	0.0%	3.3%	13.9%	86.1%	100.0%
485111	Mixed Mode Transit Systems	3.8%	0.0%	0.0%	0.0%	0.5%	4.3%	95.7%	100.0%
488190	Other Support Activities for Air Transportation	7.5%	0.9%	2.8%	0.0%	4.7%	15.9%	84.1%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
488410	Motor Vehicle Towing	2.7%	1.2%	0.0%	0.0%	3.5%	7.4%	92.6%	100.0%
488490	Other Support Activities for Road Transportation	5.0%	0.8%	0.8%	0.8%	5.9%	13.4%	86.6%	100.0%
492110	Couriers and Express Delivery Services	7.2%	1.4%	0.7%	0.0%	3.6%	13.0%	87.0%	100.0%
493190	Other Warehousing and Storage	0.4%	1.1%	0.0%	0.0%	3.4%	4.9%	95.1%	100.0%
517311	Wired Telecommunications Carriers	1.1%	1.4%	0.7%	0.0%	4.3%	7.5%	92.5%	100.0%
517919	All Other Telecommunications	0.5%	0.8%	0.3%	0.1%	2.0%	3.7%	96.3%	100.0%
518210	Data Processing, Hosting, and Related Services	3.1%	0.6%	1.9%	0.0%	8.4%	14.0%	86.0%	100.0%
519130	Internet Publishing and Broadcasting and Web Search Portals	3.8%	3.8%	3.8%	0.0%	7.7%	19.2%	80.8%	100.0%
523110	Investment Banking and Securities Dealing	2.9%	1.0%	0.0%	0.0%	1.9%	5.8%	94.2%	100.0%
524114	Direct Health and Medical Insurance Carriers	0.0%	0.9%	0.0%	0.0%	3.7%	4.6%	95.4%	100.0%
524126	Direct Property and Casualty Insurance Carriers	0.8%	0.0%	0.2%	0.0%	2.5%	3.5%	96.5%	100.0%
524210	Insurance Agencies and Brokerages	0.8%	1.1%	0.1%	0.0%	6.1%	8.1%	91.9%	100.0%
524291	Claims Adjusting	6.1%	0.0%	0.0%	0.0%	6.1%	12.3%	87.7%	100.0%
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	0.7%	0.0%	0.2%	0.0%	3.3%	4.3%	95.7%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
531312	Nonresidential Property Managers	0.2%	0.1%	0.1%	0.0%	1.3%	1.7%	98.3%	100.0%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.4%	1.3%	0.0%	0.0%	2.4%	4.2%	95.8%	100.0%
532284	Recreational Goods Rental	0.0%	2.9%	0.0%	0.0%	8.8%	11.8%	88.2%	100.0%
532289	All Other Consumer Goods Rental	0.8%	0.5%	0.5%	0.3%	5.9%	8.1%	91.9%	100.0%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.0%	1.1%	0.0%	0.0%	5.2%	6.3%	93.7%	100.0%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.4%	0.3%	0.1%	0.1%	1.4%	2.4%	97.6%	100.0%
541110	Offices of Lawyers	1.0%	0.4%	0.3%	0.0%	4.8%	6.6%	93.4%	100.0%
541191	Title Abstract and Settlement Offices	0.7%	0.0%	0.0%	0.0%	3.0%	3.7%	96.3%	100.0%
541211	Offices of Certified Public Accountants	2.8%	0.6%	0.8%	0.0%	5.8%	10.0%	90.0%	100.0%
541310	Architectural Services	3.1%	4.5%	4.4%	0.2%	9.1%	21.3%	78.7%	100.0%
541320	Landscape Architectural Services	0.8%	0.7%	0.5%	0.1%	4.6%	6.8%	93.2%	100.0%
541330	Engineering Services	3.8%	5.0%	5.3%	0.4%	5.1%	19.6%	80.4%	100.0%
541340	Drafting Services	16.4%	9.6%	12.3%	0.0%	5.5%	43.8%	56.2%	100.0%
541370	Surveying and Mapping (except Geophysical) Services	0.6%	7.4%	7.1%	0.0%	5.4%	20.6%	79.4%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
541380	Testing Laboratories	2.6%	4.3%	5.0%	0.0%	5.6%	17.5%	82.5%	100.0%
541430	Graphic Design Services	3.0%	1.9%	0.8%	0.1%	16.2%	22.1%	77.9%	100.0%
541511	Custom Computer Programming Services	2.7%	1.4%	5.7%	0.0%	5.0%	14.9%	85.1%	100.0%
541512	Computer Systems Design Services	5.2%	2.0%	4.9%	0.2%	6.6%	18.8%	81.2%	100.0%
541513	Computer Facilities Management Services	17.6%	11.8%	8.8%	2.9%	5.9%	47.1%	52.9%	100.0%
541519	Other Computer Related Services	13.4%	4.9%	10.6%	0.0%	9.9%	38.7%	61.3%	100.0%
541611	Administrative Management and General Management Consulting Services	4.8%	1.3%	1.0%	0.1%	6.1%	13.3%	86.7%	100.0%
541618	Other Management Consulting Services	1.7%	0.6%	0.4%	0.0%	3.4%	6.2%	93.8%	100.0%
541620	Environmental Consulting Services	4.4%	2.7%	4.2%	0.3%	10.9%	22.5%	77.5%	100.0%
541690	Other Scientific and Technical Consulting Services	4.9%	2.1%	2.2%	0.1%	6.9%	16.2%	83.8%	100.0%
541720	Research and Development in the Social Sciences and Humanities	2.8%	1.1%	0.0%	0.0%	4.7%	8.6%	91.4%	100.0%
541810	Advertising Agencies	2.5%	4.0%	0.8%	0.0%	15.6%	22.9%	77.1%	100.0%
541820	Public Relations Agencies	7.8%	2.6%	0.9%	0.0%	16.9%	28.2%	71.8%	100.0%
541922	Commercial Photography	3.4%	0.7%	1.0%	0.0%	5.8%	10.9%	89.1%	100.0%
541940	Veterinary Services	0.0%	0.0%	0.1%	0.0%	7.8%	7.9%	92.1%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
541990	All Other Professional, Scientific, and Technical Services	0.7%	0.5%	0.2%	0.0%	3.3%	4.7%	95.3%	100.0%
551112	Offices of Other Holding Companies	0.4%	0.1%	0.1%	0.0%	1.1%	1.6%	98.4%	100.0%
561320	Temporary Help Services	8.5%	2.5%	2.8%	0.3%	12.5%	26.6%	73.4%	100.0%
561439	Other Business Service Centers (including Copy Shops)	0.0%	14.3%	0.0%	0.0%	0.0%	14.3%	85.7%	100.0%
561499	All Other Business Support Services	0.7%	0.2%	0.2%	0.0%	2.0%	3.0%	97.0%	100.0%
561612	Security Guards and Patrol Services	9.9%	2.2%	0.5%	0.0%	4.0%	16.6%	83.4%	100.0%
561621	Security Systems Services (except Locksmiths)	2.7%	4.4%	0.6%	0.6%	5.4%	13.8%	86.3%	100.0%
561710	Exterminating and Pest Control Services	3.1%	0.9%	0.0%	0.0%	4.2%	8.2%	91.8%	100.0%
561720	Janitorial Services	5.8%	3.9%	0.7%	0.0%	6.5%	16.9%	83.1%	100.0%
561730	Landscaping Services	3.0%	2.7%	0.1%	0.1%	4.5%	10.4%	89.6%	100.0%
561790	Other Services to Buildings and Dwellings	2.0%	1.1%	0.3%	0.0%	2.7%	6.2%	93.8%	100.0%
561990	All Other Support Services	1.6%	0.5%	0.2%	0.0%	2.2%	4.5%	95.5%	100.0%
562111	Solid Waste Collection	19.0%	13.8%	3.4%	0.0%	5.2%	41.4%	58.6%	100.0%
562112	Hazardous Waste Collection	10.0%	0.0%	0.0%	0.0%	30.0%	40.0%	60.0%	100.0%
562211	Hazardous Waste Treatment and Disposal	0.7%	1.4%	1.4%	0.0%	4.9%	8.3%	91.7%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
562212	Solid Waste Landfill	2.5%	4.2%	0.0%	0.0%	4.2%	11.0%	89.0%	100.0%
562910	Remediation Services	8.7%	7.8%	2.6%	1.7%	20.0%	40.9%	59.1%	100.0%
562991	Septic Tank and Related Services	1.1%	0.6%	0.0%	0.6%	5.2%	7.5%	92.5%	100.0%
562998	All Other Miscellaneous Waste Management Services	9.7%	9.7%	3.2%	0.0%	12.9%	35.5%	64.5%	100.0%
622110	General Medical and Surgical Hospitals	0.4%	0.0%	0.0%	0.0%	1.4%	1.8%	98.2%	100.0%
623220	Residential Mental Health and Substance Abuse Facilities	1.3%	0.0%	0.0%	0.0%	11.4%	12.7%	87.3%	100.0%
624221	Temporary Shelters	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
722310	Food Service Contractors	27.1%	1.4%	12.9%	0.0%	5.7%	47.1%	52.9%	100.0%
811111	General Automotive Repair	0.5%	0.5%	0.1%	0.1%	1.7%	2.9%	97.1%	100.0%
811121	Automotive Body, Paint, and Interior Repair and Maintenance	0.3%	1.9%	0.4%	0.0%	3.8%	6.5%	93.5%	100.0%
811211	Consumer Electronics Repair and Maintenance	0.7%	0.0%	0.7%	0.0%	3.6%	5.0%	95.0%	100.0%
811219	Other Electronic and Precision Equipment Repair and Maintenance	1.0%	2.9%	0.7%	0.0%	6.7%	11.3%	88.7%	100.0%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.7%	1.1%	0.4%	0.1%	3.0%	5.4%	94.6%	100.0%

NAICS		Black	Hispanic	Asian	Native American	White Women	M/BWE	Non-M/WBE	Total
813920	Professional Organizations	0.1%	0.0%	0.0%	0.0%	0.2%	0.4%	99.6%	100.0%
926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	97.5%	100.0%
Total		1.1%	0.8%	0.4%	0.0%	0.6%	2.9%	0.7%	100.0%

Source: CHA analysis of Harris County data.

APPENDIX E:

QUALITATIVE EVIDENCE FROM TEXAS DISPARITY STUDIES

In addition to the anecdotal data collected for Harris County and provided in Chapter V of this Report, Colette Holt & Associates has conducted several studies in Texas over the last few years that shed light on the experiences of minority- and women-owned firms in the Texas marketplace. The qualitative evidence gathered in these studies fully supports the results of our Report for Harris County.

This summary of anecdotal reports provides an overview of the following Disparity Studies: the Dallas Fort Worth International Airport 2019 (“DFW”); Texas Department of Transportation 2019 (“TxDOT”), Dallas County 2015 (“Dallas County”), Parkland Health and Hospital System 2015 (“PHHS”), and the City of Fort Worth (“Fort Worth”).

1. **Discriminatory Attitudes and Negative Perceptions of Competency and Professionalism**

Many minority and women owners reported being stigmatized by their race and/or gender. Subtle and overt stereotyping and race and gender discrimination were commonplace. Respondents reported that White men often evince negative attitudes concerning their competency, skill and professionalism.

Biases about the capabilities of minority and women business owners impact all aspects of their attempts to obtain contracts and to be treated equally in performing contract work. The prevailing viewpoint is that M/WBEs and smaller firms are less qualified and capable.

Stigma sometimes can come from leading your marketing with M/WBE status, and that’s a quick way to [not get work]. (DFW, page 158)

Sometimes, I choose not to present myself as a minority contractor.... Obviously, when people meet me, [being an MBE] they assume certain things. As they get to know me and understand that I can speak construction, that I'm bilingual, that I speak engineering, then I get the comment, "Oh, you're

different." Or, "You're educated."... I do think that there is a stigma" [to being an MBE]. (DFW, page 158)

I try not to use my accent. And treatment is completely different, completely different [if they think I am White]. (TxDOT, page 161)

[Agency staff and prime vendors] are looking down at you because you are a woman. Because you're a woman, you probably didn't know IT. (Dallas County, page 104) (PHHS, page 107)

There's still this stigma. "Well, I guess, you know, we'll see what the little girls are doing over there." (DFW, page 158)

There are many women owned businesses who are trying today to survive in the male-owned, if you want to say good old boy, Texas network. Many of us. And it does keep us down because of the perception of what the woman knows in math and science as you negotiate with engineers. (Dallas County, page 102)

When a White firm commits an offense, something goes wrong, they say run his ass off. Not the firm, but the architect or that manager who did a poor job. If it's an African-American firm or Hispanic firm, run the company off. (PHHS, page 108) (Dallas County, page 103)

People of color do not get the same credit even if their financials and credit scores are the same.... [A White man has] got a little bit more credit than you did. And then there was a slowdown in paid invoices, [he's] a big GC and he floats it because he's got a little more credit. And then people turn around, "Hey, that guy's a good business. Joe Man Black over here, Hispanic, he doesn't know how to manage his business." All he did was access his credit line. And if he would've had his credit line, he could do it, too. It's like he ain't stupid. If he had a credit line, he'd access it when he needs it.... So then, [non-M/WBEs] look like they're better business people, not because they're better business people, but because people are carrying them. (Fort Worth, page 137)

Many women reported unfair treatment or sexual harassment in the business world.

Sometimes I get statements like, "Are you sure you can do the work?" (TxDOT, page 162)

I've dealt with [TxDOT staff] that just thought I was dumb as dirt because I'm a woman, but this was a woman. (TxDOT, page 163)

I still do find the initial contact with specifically, a general contractor, there is somewhat that attitude of you're a woman, let me tell you how to do this. (TxDOT, page 162)

You get a lot of that. You're a woman, pat you on the head and say it's nice that you came today. Then, all the sudden, they'll be over there doing their thing and you sit there and hear what they're saying. You're like, that's not gonna be to code buddy and good luck with that. They look at you like, how do you know that? This is my job to know those things (TxDOT, page 162)

I have offered to go out and market more for the company and... some guys that were sitting in the back, they said, "Well, we really need somebody very young and pretty and dresses very nice to go out and market, 'cause they get the attention." "Excuse me?" I think I can do a good job marketing, but I...don't meet those qualifications. (TxDOT, page 163)

I've had dinner encounters ... I've had a guy grab me at one of those.... I definitely do make it a point to not ride with certain people that I don't feel comfortable with. (DFW, page 158)

2. Access to Formal and Informal Business and Professional Networks

Both minority and women respondents reported difficulty in accessing networks and fostering relationships necessary for professional success and viability. This difficulty extended to agency staff; respondents were unable to gain access to and communicate with key agency decisionmakers. Business owners frequently stated that Texas is a "good old boy" state (TxDOT, page 161; Dallas County, page 102; Fort Worth, page 134) and that it is difficult for new firms to gain entry into a predominantly White and male-dominated industry. (DFW, page 158).

The transportation industry as a whole is dominated by the civil engineers, which typically the folks graduating in civil engineering are white men. You have a very low proportion of women and minorities with those degrees. Inherently, then in the workplace, you're seeing very low amounts of diversity.

Same things in environmental services. You don't get a lot of women who are wildlife biologists. Someone with that type of experience typically has been hunting and fishing with his father and his grandpa their entire lives and they have a good old boys club. They go drinking, they go fishing, they go playing golf. (TxDOT, page 162)

They still see women as a support system. They do not see us as business people. We are stepping out, and we are, women are coming on. Men, I hate to put it, y'all better get ready because the women are in the labor force, they're coming hard, and they're coming fast. (Fort Worth, page 136)

[Texas is] a good old boy state. It is a fact of life whether you're a woman, small business, whatever. Ladies, the only way we get a chance is we have to legally stand up and demand that we get a fair trial, that we be put on a level playing field by having rules and regulations.... [Women] are always behind. We will always be behind in this state. (Dallas County, page 101)

I've been raised in Fort Worth my whole life and so it's still a very much a good old boys club here in Fort Worth. I spend 90 percent of my time in Dallas. And I live in Fort Worth. (Fort Worth, page 134)

I'm a lifelong Fort Worth resident and taxpayer and it's very disheartening that the City of Dallas has actually been a lot easier as a small minority business. There are certain aspects of the good old boys' club [you see] attending some of the pre-bids. You do see a lot of kind of favoritism and partiality to the contractors that are there and some of the City officials. (Fort Worth, page 134)

There are many women owned businesses who are trying today to survive in the male-owned, if you want to say good old boy, Texas network. Many of us. An, it does keep us down because of the perception of what the woman knows in math and science, as you negotiate with engineers. (Dallas County, page 102)

My industry it is extremely male dominant.... They say, " Oh, there's a girl, there's a woman. What is she here for? Who does she work for?... That's [name]. Oh, she owns her own company. She's a little bitty company. She's nothing to worry about." Well, I'm going to be silent and deadly and they're going to watch because I'm coming. (Fort Worth, page 135)

The County and the hospital ... do tell you about the opportunities. The problem is you can't get into the inner circle [of agency decision makers]. (Dallas County, page 102)

[There is an] inability to get in front of the key decision makers [at the agencies].... I reached out to the executive assistant to the C[hief] I[nformation] O[fficer] and no one has responded at all. (PHHS, page 107)

3. Obtaining Work on an Equal Basis

Respondents reported that institutional and discriminatory barriers continue to exist in the Texas marketplace. They were in almost unanimous agreement that contract goals remain necessary to level the playing field and equalize opportunities. Race- and gender-neutral approaches alone are viewed as inadequate and unlikely to ensure a level playing field.

If it's not a project that has a goal, they're not bringing you to the table. (Dallas County, page 103)

Unless there's goals in the project, there is no business for small business. And even then, they try to skirt around it. And they'll use my credentials to actually go for it and then excuse me. (Dallas County, page 103)

Prime vendors see the goal as the ceiling, not as the floor. (Dallas County, page 103)

If it wasn't for that requirement, that MWB requirement, most of the businesses would probably have a very difficult time staying in business and my business, probably 80 percent of it [comes] just from these types of governmental projects that come along and it's no way that these primes would work with us ... on projects that did not have an MWB requirement. (Fort Worth, page 137)

If the program went away, what would happen? You would lose small businesses. One, if you don't have relationships, people do business with who they know. If we don't have a program that says that there has to be utilization, participation levels, whatever that is, DBE goals MBE goals, they won't use them. (Fort Worth, page 137)

The [City] work stopped as a result [of dropping Hispanic firms from the program]. It was not going to be helpful to [the prime proposer] to bring on my firm, because they wouldn't get any

points in the grading of the proposals. So, therefore, I have not been able to do any work at all since. (Fort Worth, page 138)

If [prime vendors] think they can get away with it, without having goals, then they're going to self-perform or they're going to use the folks that they have relationships with. And those folks don't necessarily look like us. (Dallas County, page 103)

Until those [business relationships] are equal, you're going to have to keep on forcing numbers. And as quick as you force a number, they're going to come up with something to circumvent that number. (Dallas County, page 104)

[Prime contractors] are like, why do I need you? Why do I need to give you any money? It's not required of me to do it. So, you may have the greatest relationship with them in the world but those larger firms, if they don't need to check the box so to speak, they're not going to reach out and say, hey, I want to help grow you more because in their mind I just helped you on this job get this much money, you should be happy and let me go do what I need to do. (Dallas County, page 103)

Minority and female entrepreneurs were also concerned about the inability to get work due to longstanding relationships that predate contracting affirmative action programs.

[Larger white male-owned firms are] going to go and use the same company [with which they usually do business]. (PHHS, page 106)

[People] tend to do business with who they know and who they like, and they really don't care that they're supposed to [meet a goal]. (Dallas County, page 103)

And if you're not a DBE or HUB or SBE, you're not going to be considered for any work as a consultant for TxDOT because they're going to use these legacy firms for most of their work on the consulting side. (TxDOT study, page 164)

There's this systemic nature of doing business with people you know. And we all like to do business with people we know. We know that they'll come through. They'll be on time. They'll be under budget.... [But] the systemic aspect of familiarity for others sometimes breeds contempt for the person trying to get in the door. (Fort Worth, page 133)

Respondents also maintained that prime contractors are not comfortable with minorities taking larger roles. They indicated that even M/WBEs who had accessed large public contracts through M/WBE programs did not translate into public sector work.

Do we really want to play this game and how much headache and how much headache do we want to deal with?... We employ 75 employees and I've had minorities grow through our organization. But, the challenge that I have is now that we're able to bond single projects up to 15, 18 million dollars, I'm getting a bigger pushback.... When we can sit down and start talking business and how we're going to staff the job, going to put my bonding up, what's the duration and the schedule? [The large general contractors are] doing this, no, no, no [shaking head]. (Dallas County, page 104)

[A general contractor, which this MBE had worked on major project jobs, when approached about a private sector project, responded] there's no MWBE [goal] on this: I said, wait a minute. We just worked together for five years, you know me. Yes, but there's not MWBE goals. I said, you mean to tell me I can't do [scope]? It's right across the street from my headquarters. Well, there's no MWBE goals. So, he's one of the good guys. (PHHS, page 109)

Respondents also suggested approaches to increasing M/WBE opportunities and capacities.

Come out with a mentoring program that's goal-oriented and visible. (PHHS, page 110)

A good mentor helps you with a lot of things that have nothing to do with that specific project but with your business. Helps you with your safety plan and your quality control plans (Dallas County, page 105)

We've had a mentorship with [firm name] which has helped us immensely. Because I don't think we would have been able to walk through the doors or bid on the things that we've bid on or have the opportunity had we not had that mentorship. Because they had forged a path in places where I hadn't seen before. And I work in a very male dominated business in [specialty trade]. It's predominantly men. And there is some stigma with that. There are competency issues when you show up at a meeting and you're a woman and you're representing the [specialty trade] company. So, I'm really thankful for the

mentorship program because I think it's just something that helps open doors. (PHHS, page 110)

I'm hearing a lot of positive feedback on mentor-protégé [initiatives]. Because you write a really good mentor-protégé agreement and you have a great mentor, you can really learn a lot. (Dallas County, page 105)

I have some experience with J[oint] V[entures] and mentor-protégé relationships and they work but it depends on A, who you're partnering with. It's just like with anything. A JV is like a marriage. (Dallas County, page 105)

Our challenge [with acting as joint venture partner with a majority-owned firm] that we have when we're sitting at the table [is] we're really not in a decision-making position [with the majority-owned partner]. (Dallas County, page 105)

There should be contracts from which] the big boys should be completely excluded. (Dallas County, page 106)