

City of Chattanooga Tennessee

2019 Disparity Study Final Report



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LAW Reporting

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I. INTRODUCTION

In October 2018, the City of Chattanooga, Tennessee (“City”) contracted with Griffin & Strong, P.C. (“GSPC”) to conduct a disparity study. The purpose of this disparity study (“Study”) was to analyze procurement data to determine the utilization of Minority Business Enterprises (MBE) Females Business Enterprises (WBEs) (collectively, “MWBE”) relative to the availability of such firms to compete for City business on Construction, Architecture and Engineering (“A&E”), Professional Services, Goods, and Other Services contracts. Governmental entities, such as the City, have authorized disparity studies in response to City of Richmond v. J.A. Croson Co.¹ and the cases which followed, to determine whether there is a compelling interest for remedial procurement programs, based upon ethnicity, race, and gender.

The Study collected and analyzed relevant data on businesses in the industries of:

1. Construction
2. Architecture and Engineering (“A&E”)
3. Professional Services
4. Other Services
5. Goods

The Study Period for this was a five (5) year period from July 1, 2013 - June 30, 2018 (FY2014-FY2018).

Study Objectives

The principal objectives of this study are:

1. Is there a statistically significant disparity in the relevant geographic and product markets between the percentage of qualified minority and Females owned firms (“MWBE” and “DBE”) willing and able to provide goods or services to the City in each category of contracts and the percentage of dollars spent with such firms by the City (whether as prime contractors/consultants or subcontractors/consultants)?

2. If a statistically significant disparity exists, have factors, other than race and gender, been ruled out as the cause of that disparity, such that there can be an inference of discrimination?

3. Can the discrimination be adequately remedied with race-neutral and gender-neutral remedies?

4. If race and gender neutral remedies are not sufficient, does the evidence from the Study legally support a race and/or gender-conscious remedial program?

5. Are the proposed remedies narrowly tailored to the strong basis in evidence from the Study?

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

Technical Approach

In conducting this Study and preparing its recommendations, GSPC followed a carefully designed work plan that allowed Study team members to fully analyze availability, utilization, and disparity with regard to MWBE participation. The final work plan consisted of, but was not limited to, the following major tasks:

- establishing data parameters and finalizing a work plan;
- legal analysis;
- policy and procurement process review and remedial program analysis;
- collecting, organizing, and cleaning data;
- conducting market area analyses;
- conducting product market analysis;
- conducting utilization analyses;
- estimating the availability of qualified firms;
- analyzing the utilization and availability data for disparity and significance;
- conducting private sector analysis including credit and self-employment analysis;
- collecting and analyzing anecdotal information; and
- preparing a final report that presents race- and gender-neutral and narrowly tailored race- and gender-based remedies.

Report Organization

This report is organized into the following sections, which provide the results of GSPC's quantitative and qualitative analysis. In addition to this introductory chapter, this report includes:

- Chapter I, introduction to the study, detailing study objectives, research questions and the technical approach;
- Chapter II, the Executive Summary including a summary of the findings and recommendations based on the analysis;
- Chapter III, which presents a legal overview of disparity studies and the requirements for race- and gender-conscious programs;
- Chapter IV, which provides a review of the City's purchasing policies and practices, particularly as they relate to minority and Females owned firms;
- Chapter V, which presents the methodology used in the collection of statistical data from the City and the analyses of those data as they relate to relative MWBE utilization and availability for prime contractors and subcontractors;
- Chapter VI, which presents an analysis of disparities, if any, in the private sector;
- Chapter VII, which provides the analysis of anecdotal data collected from the survey of business owners, personal interviews, focus groups, public hearings, organizational meetings, and emailed comments and;
- Chapter VIII, the conclusion.

Note: Study Definitions are contained in Appendix K.

II. EXECUTIVE SUMMARY

This chapter presents the findings and conclusions resulting from the disparity study conducted by Griffin & Strong, P.C. (“GSPC”) for the City of Chattanooga related to Construction, Architecture and Engineering (“A&E”), Professional Services, Other Services, and Goods for FY2014-FY2018.

As outlined in the Legal Analysis in Chapter III, the courts have indicated that for a race-based or gender-based remedial program to be maintained, there must be a clear evidentiary foundation established for a new program or the continuation of existing programs designed to remedy disparities in the marketplace. While Mayor Berke and the current administration have made attempts to respond to perceived disparities in the Chattanooga marketplace, the framework for aggressive, race-conscious remedies was unavailable for use by the City without having the factual basis in evidence outlined in Croson and its progeny (explored more in the Legal chapter).

As indicated in the findings below, GSPC found statistically significant underutilization of minority and Caucasian Female owned firms as prime contractors in all five (5) work categories that were analyzed with the exception of Asian American owned firms, Hispanic American owned firms and Native American owned firms in A&E, where there was no identified availability or utilization; and Hispanic American owned firms in Other Services. In subcontracting, MWBE firms were found to be statistically significantly underutilized in Construction. The results of the GSPC Prime Vendor Questionnaire showed that MBE firms did not receive any measurable Professional Services subcontract dollars. By that same metric, Caucasian Female owned firms and African American owned firms were both found to be overutilized in A&E subcontracting, although GSPC believes this was created by limited reporting of Non-MWBE subcontractor utilization. GSPC also collected and analyzed anecdotal evidence of the experiences of firms in the City’s marketplace in order to help shape GSPC’s findings and recommendations. Lastly, GSPC performed a regression analysis that found that there was evidence indicating that the identified disparities were likely caused by the race, ethnicity, or gender status of the firm owners, enough so that an “inference of discrimination” can be made.

Despite evidence pointing to the presence of discrimination in the City of Chattanooga’s contracting process, it is important to note that the presence of these disparities cannot be isolated to a causal relationship between individuals or administrations. While there may be active discrimination occurring in the marketplace, this study and its resulting evidence point to the “present effect of past discrimination” impacting MWBE firms’ ability to equitably participate in the contracting process. The presence of discrimination in the Chattanooga private sector also support the City itself acting as a change agent to avoid becoming either an “active participant” through underutilization in its own contracting, or a “passive participant” to discrimination by private actors in its marketplace.

Prior to completion of this Study, the City of Chattanooga did not have the evidentiary foundation, per Croson, required to pursue more aggressive remedial programs. Despite this, the City took efforts to remedy perceived disparities in its marketplace through the use of race neutral measures and programmatic initiatives. While these policies lacked the means for aggressive enforcement, GSPC commends the City and the current administration on the spirit behind these programs and the commitment to take the initiative

to address these disparities and promote equal opportunity for all firms (addressed further in Commendation 1 below).

A. SUMMARY OF FINDINGS

Economic opportunity for MWBE firms across the marketplace has been depressed in both the Chattanooga public contracting and in the Chattanooga private sector marketplace. Despite exhaustively surveying and calling prime contractors from the study period, GSPC was unable to identify a reasonable amount of MWBE participation in contracting as might be expected in the marketplace. Overall, GSPC was unable to establish more than minimal participation in both City of Chattanooga prime contracting and subcontracting by MWBE firms (Findings 4 and 6).

The presence of broad geographic markets in most contract categories illustrates that the City is doing a considerable amount of contracting outside of the Chattanooga metropolitan area and in some cases, outside of the State of Tennessee completely. While some may argue that these expansive markets and small supplier base are indicative of a lack of overall availability by MWBE firms in the marketplace, or limitations in the ability of these firms to adequately perform on these contracts, the GSPC availability and threshold analyses provide an alternative explanation (Findings 1 and 2).

GSPC was able to identify available MWBE firms in the Chattanooga marketplace, many of whom have already indicated an interest in public contracting. The threshold analysis responds to questions regarding the capacity of these firms to perform on contracts. The discrepancy in contract sizing (several small contracts for few dollars/few large contracts with the majority of the spending) suggests a few critical implications:

1. The prevalence of small City contracts suggests that the majority of firms may be self-performing the work rather than subcontracting.
2. The small average and median contract sizes are suggestive that contract size should not be prohibitive to small firms seeking to perform as prime contractors on City projects.
3. On the few large dollar contracts that make up the majority of all City spending without subcontracting policies or programs, large contract awards may have produced limited contract opportunity for local small and diverse firms.
4. Without tracking and reporting, any subcontracting that may have been done on large contracts may have occurred with vendors outside of the City metro area, reducing the benefit of new developments for local businesses.

Lastly, through anecdotal research, GSPC was able to present the diverse community's perceptions of being forgotten in the midst of the City's economic expansion. Diverse communities felt they were being squeezed out of their neighborhoods through gentrification and were being provided limited economic opportunity in entrepreneurship, contracting, and workforce. To the business community, there is a significant need for an increase in procurement transparency, business outreach, training and development that the City's current DBE program may not be adequately equipped to meet.

B. STUDY FINDINGS

GSPC's findings responded to the five (5) research questions as follows:

1. GSPC concluded, based upon the outcome of its Availability/Utilization Disparity analysis in Chapter V of the report and the analyses in Appendix F, G, and M that, in total, there is a statistically significant disparity in the relevant geographic and product markets between the number of qualified minority and Caucasian Female owned firms ("MWBE") willing and able to provide goods or services to the City in each of the categories of contracts and the number of such firms actually utilized by the City (whether as prime contractors/consultants or subcontractors/consultants). GSPC found that, generally, MWBEs were statistically significantly underutilized as prime contractors, as subcontractors, and as prime and subcontractors combined in every work category during the Study Period, with the exception of Caucasian Female owned firms in Professional services; Caucasian Female in A&E; Hispanic American owned firms in Goods, and Native American firms in Other Service on prime contracts. Chapter VI of the Study also found very low utilization of MWBEs on private sector commercial projects.
2. Having found that a statistically significant disparity exists, race and gender are still significant after controlling for other factors. Specifically, in Chapter VI of the Study, GSPC found that being an MWBE does have an adverse impact on securing public contracting and subcontracting opportunities relative to Non-MWBEs in general.
3. The City of Chattanooga currently has no remedial program for MWBE subcontractors, making any contracting efforts taken during the Study Period, race neutral. Given the significant disparities found for several MWBE groups, this would indicate that race- and gender-neutral remedies alone are insufficient to remedy the identified disparities.
4. GSPC found quantitative and qualitative evidence from the Study to legally support the implementation of race- and/or gender-conscious elements in a remedial program.
5. GSPC has proposed recommendations that are narrowly tailored to the strong basis in evidence from the Study, explained in the recommendations below.

FINDING 1: LEGAL FINDINGS

Consistent with the "narrow tailoring" aspect of the strict scrutiny analysis, the City first considered (and implemented) race- and gender-neutral measures to try to increase utilization of MWBE firms, but the present Study shows that those measures have not been effective in ameliorating the identified disparities.²

² See *Croson*, 488 U.S. at 507-08.

Accordingly, the City has a basis to introduce race- and gender-conscious remedies or policies toward that goal.³

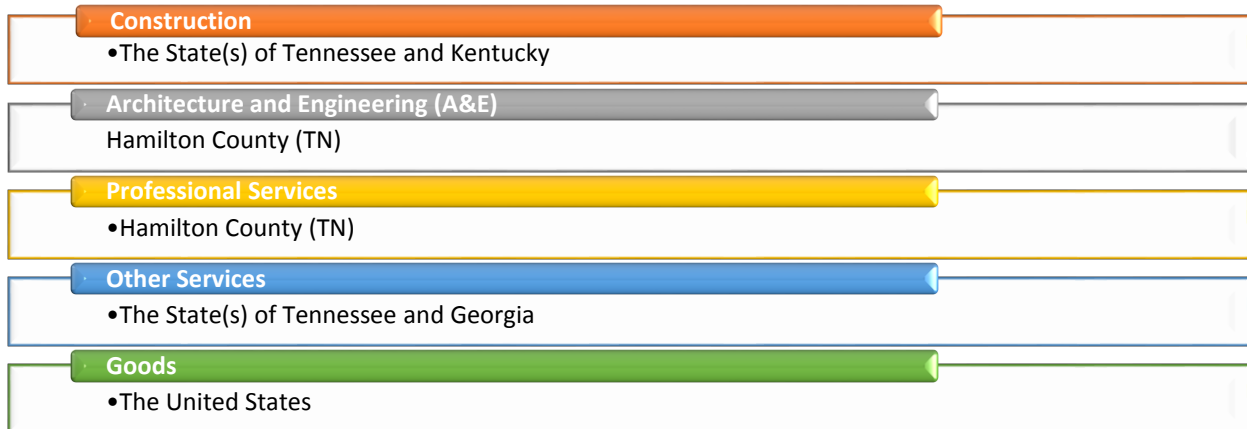
Moreover, the use of a regression analysis and consideration of the contracting environment in the private sector as part of the requested Study allow the City to demonstrate that factors other than MWBE status cannot fully account for the statistical disparities found. Stated otherwise, the City can show that MWBE status continues to have an adverse impact on a firm’s ability to secure contracting opportunities with the City, further supporting more aggressive remedial efforts.

Lastly, having provided or obtained statistical and anecdotal evidence of disparities that are race-, ethnicity-, and gender-specific, the City can ensure that the more robust remedies considered as a result of this Study can be limited to minority groups for which underutilization and an inference of discrimination has been identified.⁴

FINDING 2: GEOGRAPHIC MARKETS

The figure below summarizes the geographical area where at least 75 percent of prime awardees were located in each industry. In analyzing the Relevant Market data, GSPC tabulated the percentage of dollars awarded, beginning with the City of Chattanooga (by zip codes). GSPC continued counting in radius surrounding the City of Chattanooga until the cumulative percentage was equal to or greater than 75 percent. The availability and utilization analyses were conducted only on firms with offices within the geographical markets. The results were as follows:

Table 1: Summary of Relevant Geographic Market (by Awards):
City of Chattanooga Disparity Study



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³ Id.

⁴ Id.; see also *Associated General Contractors v. Drabik*, 214 F.3d at 739.

FINDING 3: THRESHOLD ANALYSIS

In nearly every work category, there were significant discrepancies between the median contract size and the average contract size, partially skewed by the presence of a few very large contracts that made up the majority of the City's spending during the study period. In total, the City issued 10,313 purchase orders; of these purchase orders, there were 149 contracts valued at \$1 million dollars or more which accounted for 78.9 percent of all dollars spent during the study period. This is exacerbated when focusing solely on contracts over five million dollars, where only 33 total contracts accounted for 57.18% of all dollars spent during the Study Period.

Table 2: Award Thresholds – Construction
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	96	42.29%	\$194,939.00	0.08%
5,000.01 to 10,000	33	14.54%	\$234,957.97	0.10%
10,000.01 to 50,000	33	14.54%	\$646,417.20	0.27%
50,000.01 to 100,000	7	3.08%	\$497,225.72	0.20%
100,000.01 to 250,000	11	4.85%	\$1,691,376.61	0.70%
250,000.01 to 500,000	15	6.61%	\$5,035,376.71	2.07%
500,000.01 to 750,000	8	3.52%	\$5,012,553.83	2.06%
750,000.01 to 1,000,000	2	0.88%	\$1,742,415.39	0.72%
1,000,000.01 to 1,500,000	4	1.76%	\$4,470,619.42	1.84%
1,500,000.01 to 2,000,000	2	0.88%	\$3,571,082.17	1.47%
2,000,000.01 to 2,500,000	1	0.44%	\$2,384,000.45	0.98%
2,500,000.01 to 5,000,000	6	2.64%	\$21,671,664.50	8.92%
Over 5,000,000	9	3.96%	\$195,748,472.55	80.59%
Total	227	100.00%	\$242,901,101.51	100.00%

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Average	Median
\$1,070,048.91	\$6,700.00

In Professional Services, there were a total of 1008 awards over \$1,000 for a total of \$365,199,402.33 over the Study Period. The average award was \$362,300.99 with half of all awards at \$5,326.68 or less. Only seven (7) or 0.69 percent of all Professional Service awards were \$5M or more, but they account for 78.40 percent of all Professional Service award dollars.

Table 3: Award Thresholds – Professional Services
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	491	48.71%	\$1,133,818.12	0.31%
5,000.01 to 10,000	166	16.47%	\$1,180,867.54	0.32%
10,000.01 to 50,000	210	20.83%	\$5,150,904.11	1.41%
50,000.01 to 100,000	42	4.17%	\$3,042,754.70	0.83%
100,000.01 to 250,000	37	3.67%	\$5,938,232.17	1.63%
250,000.01 to 500,000	17	1.69%	\$6,049,856.00	1.66%
500,000.01 to 750,000	12	1.19%	\$7,433,781.10	2.04%
750,000.01 to 1,000,000	5	0.50%	\$4,247,868.66	1.16%
1,000,000.01 to 1,500,000	7	0.69%	\$8,511,454.26	2.33%
1,500,000.01 to 2,000,000	3	0.30%	\$4,848,460.98	1.33%
2,000,000.01 to 2,500,000	3	0.30%	\$6,440,071.37	1.76%
2,500,000.01 to 5,000,000	8	0.79%	\$24,921,219.93	6.82%
Over 5,000,000	7	0.69%	\$286,300,113.39	78.40%
Total	1008	100.00%	\$365,199,402.33	100.00%

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Average	Median
\$362,300.99	\$5,326.68

In Other Services, there were a total of 3434 awards over \$1,000 for a total of \$254,823,261.90 over the Study Period. The average award was \$74,205.96 with half of all awards at \$3,318.07 or less. Only 50 or 1.46 percent of all Other Service awards were \$1M or more, but they account for 69.91 percent of all Other Service award dollars.

Table 4: Award Thresholds – Other Services
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	2106	61.33%	\$4,764,416.90	1.87%
5,000.01 to 10,000	500	14.56%	\$3,633,793.69	1.43%
10,000.01 to 50,000	523	15.23%	\$10,803,643.26	4.24%
50,000.01 to 100,000	88	2.56%	\$6,299,582.82	2.47%
100,000.01 to 250,000	91	2.65%	\$14,815,626.55	5.81%
250,000.01 to 500,000	48	1.40%	\$16,326,735.12	6.41%
500,000.01 to 750,000	18	0.52%	\$11,178,566.21	4.39%
750,000.01 to 1,000,000	10	0.29%	\$8,850,869.26	3.47%
1,000,000.01 to 1,500,000	13	0.38%	\$15,343,351.61	6.02%
1,500,000.01 to 2,000,000	11	0.32%	\$19,398,600.34	7.61%
2,000,000.01 to 2,500,000	3	0.09%	\$7,059,441.06	2.77%
2,500,000.01 to 5,000,000	13	0.38%	\$47,470,358.80	18.63%
Over 5,000,000	10	0.29%	\$88,878,276.28	34.88%
Total	3434	100.00%	\$254,823,261.90	100.00%

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Average	Median
\$74,205.96	\$3,318.07

In Architecture & Engineering, there were a total of 151 awards over \$1,000 for a total of \$25,450,769.59 over the Study Period. The average award was \$168,548.14 with half of all awards at \$9,158.94 or less. Only eight (8) or 5.30 percent of all Architecture & Engineering awards were \$1M or more, but they account for 63.67 percent of all Architecture & Engineering award dollars.

Table 5: Award Thresholds – Architecture & Engineering
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	64	42.38%	\$161,601.63	0.63%
5,000.01 to 10,000	23	15.23%	\$192,470.48	0.76%
10,000.01 to 50,000	29	19.21%	\$628,725.06	2.47%
50,000.01 to 100,000	7	4.64%	\$514,717.32	2.02%
100,000.01 to 250,000	8	5.30%	\$1,390,979.83	5.47%
250,000.01 to 500,000	7	4.64%	\$2,582,931.76	10.15%
500,000.01 to 750,000	3	1.99%	\$1,991,882.86	7.83%
750,000.01 to 1,000,000	2	1.32%	\$1,781,990.32	7.00%
1,000,000.01 to 1,500,000	5	3.31%	\$6,194,888.96	24.34%
1,500,000.01 to 2,000,000	0	0.00%	\$0.00	0.00%
2,000,000.01 to 2,500,000	1	0.66%	\$2,294,160.55	9.01%
2,500,000.01 to 5,000,000	1	0.66%	\$2,580,884.08	10.14%
Over 5,000,000	1	0.66%	\$5,135,536.74	20.18%
Total	151	100.00%	\$25,450,769.59	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$168,548.14	\$9,158.94

In Goods, there were a total of 5493 awards over \$1,000 for a total of \$237,806,357.08 over the Study Period. The average award was \$43,292.62 with half of all awards at \$3,450.00 or less. Only 41 or 0.75 percent of all Goods awards were \$1M or more, but they account for 57.05 percent of all Goods award dollars.

Table 6: Award Thresholds – Goods
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	3256	59.28%	\$7,344,994.68	3.09%
5,000.01 to 10,000	719	13.09%	\$5,185,190.90	2.18%
10,000.01 to 50,000	1134	20.64%	\$21,942,042.91	9.23%
50,000.01 to 100,000	131	2.38%	\$9,604,781.71	4.04%
100,000.01 to 250,000	132	2.40%	\$20,604,743.43	8.66%
250,000.01 to 500,000	50	0.91%	\$17,194,928.29	7.23%
500,000.01 to 750,000	21	0.38%	\$12,513,894.41	5.26%
750,000.01 to 1,000,000	9	0.16%	\$7,736,673.99	3.25%
1,000,000.01 to 1,500,000	19	0.35%	\$22,364,254.64	9.40%
1,500,000.01 to 2,000,000	4	0.07%	\$6,888,250.59	2.90%
2,000,000.01 to 2,500,000	4	0.07%	\$9,618,444.26	4.04%
2,500,000.01 to 5,000,000	8	0.15%	\$28,873,184.05	12.14%
Over 5,000,000	6	0.11%	\$67,934,973.19	28.57%
Total	5493	100.00%	\$237,806,357.08	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$43,292.62	\$3,450.00

In all Work Categories, there were a total of 10313 awards over \$1,000 for a total of \$1,126,180,892.41 over the Study Period. The average award was \$109,200.13 with half of all awards at \$3,600.00 or less. Only 149 or 1.44 percent of all awards were \$1M or more, but they account for 78.93 percent of all award dollars.

Table 7: Award Thresholds – All Work Categories
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	6013	58.31%	\$13,599,770.33	1.21%
5,000.01 to 10,000	1441	13.97%	\$10,427,280.58	0.93%
10,000.01 to 50,000	1929	18.70%	\$39,171,732.53	3.48%
50,000.01 to 100,000	275	2.67%	\$19,959,062.27	1.77%
100,000.01 to 250,000	279	2.71%	\$44,440,958.60	3.95%
250,000.01 to 500,000	137	1.33%	\$47,189,827.88	4.19%
500,000.01 to 750,000	62	0.60%	\$38,130,678.42	3.39%
750,000.01 to 1,000,000	28	0.27%	\$24,359,817.62	2.16%
1,000,000.01 to 1,500,000	48	0.47%	\$56,884,568.89	5.05%
1,500,000.01 to 2,000,000	20	0.19%	\$34,706,394.08	3.08%
2,000,000.01 to 2,500,000	12	0.12%	\$27,796,117.70	2.47%
2,500,000.01 to 5,000,000	36	0.35%	\$125,517,311.36	11.15%
Over 5,000,000	33	0.32%	\$643,997,372.15	57.18%
Total	10313	100.00%	\$1,126,180,892.41	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$109,200.13	\$3,600.00

With a median contract size of \$3,600 and an average contract size of \$109,200.13, GSPC determined that it is unlikely that contract size would preclude smaller firms from performing as prime contractors on City of Chattanooga contracts. Furthermore, all firms likely have the capacity to perform as prime contractors on the majority of City contracts.

This is further supported by data showing that the overwhelming majority of City contracts are under \$100,000 (93.65 percent of the City’s prime awards were valued at \$100,000 or less and 97.69 percent are \$500,000 or less). Because of the relatively small average and median contract size and because the majority of contracts fall under these thresholds, there is no need for GSPC to provide separate availability estimates between prime contractors and subcontractors. It is likely that firms can perform interchangeably as both prime contractors and subcontractors. Notwithstanding this determination, GSPC does not specifically suggest that all firms have the capacity to perform on all contracts. Other issues of capacity are controlled for in the regression analysis in Chapter VI, where GSPC found that even when controlling for numerous factors such as size of firm, education of owner, number of employees, etc. there was still a statistically significant disparity in the utilization of MWBE firms.

FINDING 4: AVAILABILITY

The measures of availability utilized in this Study incorporate all the criteria of availability required by Croson:

- The firm does business within an industry group from which the City of Chattanooga makes certain purchases.
- The firm's owner has taken steps to demonstrate interest in doing business with government.
- The firm is located within a relevant geographical area such that it can do business with the City of Chattanooga.

The firms used to calculate Availability came from the Master Vendor File (See Chapter IV (G)(2)). GSPC found that firms were available to provide Goods and Services to the City as reflected in the following percentages by each race, ethnicity, and gender group.

The data is separated into the five (5) major business categories: Construction, Professional Services, Other Services, A&E, and Goods. Figure 3 below shows the percentage of firms by race/gender/ethnicity as compared with the total number of firms in the marketplace. All availability (not broken down by work category) is contained in Appendix H.

Table 8: Availability Estimates by Work Category
By Relevant Market
City of Chattanooga Disparity Study

Ethnicity	Construction	A&E	Professional Services	Other Services	Goods
African American	9.80%	3.33%	3.41%	7.88%	2.50%
Asian American	1.06%	0.00%	0.20%	0.98%	0.93%
Hispanic American	1.65%	0.00%	0.50%	1.12%	0.65%
Native American	0.59%	0.00%	0.53%	0.29%	0.34%
Unidentified MWBE/DBE	0.35%	0.00%	0.70%	0.81%	0.25%
Total Minority	13.45%	3.33%	5.34%	11.08%	4.67%
Caucasian Female	19.13%	12.22%	5.21%	9.27%	7.62%
Total MWBE	32.58%	15.55%	10.55%	20.35%	12.29%
Non-MWBE	67.41%	84.44%	89.88%	79.65%	87.71%
Total	100%	100%	100%	100%	100%

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The availability analyzed from the Master Vendor File includes all unique vendors in each work category. The table shows that, in Construction, African American owned firms make up 9.80 percent of all construction firms in the relevant market. Caucasian Female owned firms make up 19.13 percent. Asian American owned firms account for 1.06 percent, and Hispanic American and Native American owned firms have availability of 1.65 percent and 0.59 percent, respectively, in Construction within the Relevant Market. In total, MWBEs account for 32.59 percent of all available firms in Construction.

In Professional Services, availability indicates show that Non-MWBE owned firms make up 89.88 percent of all available firms and MWBEs are 10.12 percent. African American owned firms represent 3.41 percent of all Professional Services firms and Caucasian Female owned firms make up 5.21 percent of all available Professional Services firms. Asian American and Hispanic American owned Professional Services firms account for 0.20 percent and 0.50 percent respectively. Native American owned firms have 0.10 percent availability in this category.

African American owned firms make up 7.88 percent of Other Services firms and Caucasian Female owned firms make up 9.27 percent. Non-MWBE owned firms account for 79.65 percent, while Asian American owned firms represent 0.98 percent. Hispanic American owned firms have 1.12 percent and Native American owned firms have 0.29 percent availability in this category. MWBEs account for 20.35 percent of all available firms in Other Services.

In A&E, there is a 0 percent availability for Native American owned firms, Hispanic American owned firms, and Asian American owned firms. MWBE owned firms make up 15.38 percent of all available firms, with Caucasian Female owned firms and African American owned firms making up 12.09 percent and 3.30 percent respectively. Non-MWBE firms make up 84.62 percent of available firms.

Goods availabilities reflect that businesses owned by African Americans make up 2.50 percent and Caucasian Female owned firms make up 7.62 percent of the firms. Non-MWBEs account for 87.71 percent of all availability, while Asian American owned firms have 0.93 percent. Hispanic American owned firms have 0.65 percent and Native American owned firms have 0.34 percent availability in this category. MWBEs total 12.29 percent of all available firms in Goods.

FINDING 5: MWBE UTILIZATION

As the table below shows, the City of Chattanooga awarded a total of \$537,755,463.07 in prime contract spending in the Relevant Market during the Study Period, and \$28,342,903.78 of this amount, or 5.2 percent, was awarded with MWBE firms as prime contractors. Of this total, \$15,682,096.28 was spent with WBE firms and Caucasian Female owned firms, versus \$12,660,807.50 spent with MBE firms. This total is further broken down by ethnic groups as follows:

Table 9: Prime Utilization (FY14-FY18)
City of Chattanooga Disparity Study

Race/Ethnicity	Construction		Professional Services		Other Services		A&E		Goods	
African American	\$59,350.61	0.03%	\$565,437.07	0.18%	\$6,716,290.59	3.43%	\$0.00	0.00%	\$326,319.72	0.14%
Asian American	\$0.00	0.00%	\$21,825.00	0.01%	\$463,620.39	0.24%	\$0.00	0.00%	\$182,775.17	0.08%
Hispanic American	\$0.00	0.00%	\$82,314.00	0.03%	\$496,745.73	0.25%	\$0.00	0.00%	\$1,183,895.74	0.50%
Native American	\$0.00	0.00%	\$3,800.00	0.00%	\$1,553,880.10	0.79%	\$0.00	0.00%	\$11,420.11	0.00%
Total MBE	\$59,350.61	0.03%	\$673,376.07	0.22%	\$9,230,536.81	4.71%	\$0.00	0.00%	\$1,704,410.74	0.72%
Caucasian Female	\$463,550.67	0.20%	\$1,720,011.05	0.56%	\$6,712,442.48	3.43%	\$1,385,025.89	6.64%	\$5,401,066.19	2.27%
Unidentified MWBE/DBE	\$0.00	0.00%	\$2,975.00	0.00%	\$871,405.65	0.44%	\$0.00	0.00%	\$118,752.62	0.05%
Total MWBE/DBE	\$522,901.28	0.23%	\$2,396,362.12	0.78%	\$16,814,384.94	8.59%	\$1,385,025.89	6.64%	\$7,224,229.55	3.04%
Non-MWBE	\$229,715,819.25	99.77%	\$305,120,380.43	99.22%	\$179,015,789.99	91.41%	\$19,488,361.20	93.36%	\$230,582,127.53	96.96%
Total	\$230,238,720.53	100.00%	\$307,516,742.54	100.00%	\$195,830,174.93	100.00%	\$20,873,387.09	100.00%	\$237,806,357.08	100.00%

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FINDING 6: UNUTILIZED CAPACITY

As a part of the GSPC Survey of Business Owners, surveyed firms reported the highest contract award received by their firm in either the public or private sectors. The survey responses were measured against the highest contract award identified in the City awards data for each race/ethnicity/gender group. It then compared that to the percentage of each MWBE group which responded with a single project award higher than the highest contract awarded by the City. The percent of vendors who report receiving a contract higher than the largest granted by the City is what GSPC has termed “Unutilized Capacity”, where these firms have reported the ability to perform on contracts exceeding the largest granted by the City. The awards include both public and private contract awards versus public contracts only from the City. Seventy-Five percent of Native American owned firms who responded to the survey have been awarded contracts in excess of the highest award given to a Native American firm by the City; Similarly, 33 percent of Asian American owned firms reported unutilized capacity. Each MWBE group represented having received a contract award larger than those found in the City award data, including African American (13.79%), Caucasian Female (5.13%) and Hispanic American owned firms 14.29%). This means that firms could have performed on contracts at higher dollars than those awarded to that race/ethnicity/gender group.

Table 10: Highest Awards by MWBE Status compared to Survey Responses
(from \$1,000 and over award data and Question 11 Responses from Survey of Business Owners)
City of Chattanooga Disparity Study

Race/Ethnicity	Highest Award	% Surveyed with single contract in Excess of the Highest Award (Unutilized capacity)
African American	\$1,073,232.90	13.79%
Asian American	\$2,347,000.60	33.33%
Hispanic American	\$1,132,455.00	14.29%
Native American	\$932,277.62	75.00%
Caucasian Female	\$2,737,353.50	5.13%
Non-MWBE	\$127,108,221.15	0.00%

In addition to this measure of unutilized capacity, the Private Sector Analysis (Chapter VI of this Study and discussed in Finding 7 below) found that controlling for several other variables upholds the perception of capability for MWBE firms. GSPC determined that MWBE capacity should maintain the ability to perform on prime contracts from the City of Chattanooga. This further strengthens support for the use of uniform availability estimates for prime contracting and subcontracting.

FINDING 7: MWBE SUBCONTRACTOR UTILIZATION

The City of Chattanooga does not track subcontractor data, nor does it maintain uniform records of proposed subcontractors on bidder documents. GSPC solicited prime contractors for information on all subcontractors utilized on contracts over the Study Period in Construction, A&E and Professional Services. GSPC then compared total MWBE subcontractor award dollars to total Non-MWBE subcontractor award dollars and total vendor availability in order to demonstrate the percentages of subcontractor awards received by MWBEs during the Study Period.

Table 11: Subcontractor Utilization - Construction by Dollars
In the Relevant Market – State of TN and State of KY
 City of Chattanooga, TN Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$11,010.00	2.89%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$11,010.00	2.89%
Caucasian Female	\$0.00	0.00%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$11,010.00	2.89%
Non-MWBE	\$370,494.00	97.11%
Total	\$381,504.00	100.00%

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In Professional Services, Caucasian Female owned firms received \$64,100.00 or 72.12 percent of awards during the Study Period. No other minority subcontractors were utilized. Non-MWBE firms make up \$24,780.00 or 27.88 percent of Professional Service awards.

Table 12: Subcontractor Utilization - Professional Services by Dollars
In the Relevant Market – Hamilton County, TN
 City of Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$0.00	0.00%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$0.00	0.00%
Caucasian Women	\$64,100.00	72.12%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$64,100.00	72.12%
Non-MWBE	\$24,780.00	27.88%
Total	\$88,880.00	100.00%

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In A&E, Caucasian Female owned firms received \$20,372.50 or 27.04 percent of awards during the Study Period. African American owned firms received \$12,650 or 16.79 percent of awards. Non-MWBE firms make up \$75,340.00 or 56.17 percent of Professional Service awards.

Table 13: Subcontractor Utilization - Architecture & Engineering by Dollars
In the Relevant Market – Hamilton County, TN
City of Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$12,650.00	16.79%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$12,650.00	16.79%
Caucasian Females	\$20,372.50	27.04%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$33,022.50	43.83%
Non-MWBE	\$42,317.50	56.17%
Total	\$75,340.00	100.00%

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FINDING 8: SUMMARY OF DISPARITY ANALYSIS FOR FY2014-FY2018

The tables below indicate those MWBE groups where a statistically significant disparity was found during the Study Period. Several groups in A&E, including Asian American owned firms, Hispanic American owned firms, and Native American owned firms, they were found at parity with no availability or utilization on A&E contracts or subcontracts.

Table 14: Statistically Significant Underutilization of MWBEs in Prime Contracting
During Study Period
City of Chattanooga Disparity Study

	Construction	A&E	Professional Services	Other Services	Goods
African American	X	X	X	X	X
Asian American	X	*	X	X	X
Hispanic American	X	*	X		X
Native American	X	*	X	X	X
Caucasian Female	X	X	X	X	X

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Table 15: Statistically Significant Underutilization of MWBEs in Subcontracting
During Study Period
City of Chattanooga Disparity Study

	Construction	A&E	Professional Services
African American	X		X
Asian American*	X	*	X
Hispanic American*	X	*	X
Native American*	X	*	X
Caucasian Female	X		
Non-MWBE		X	X

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FINDING 9: POLICY FINDINGS

1. Supplier Diversity Program

The City has had a Supplier Diversity program since 2013. The City’s Supplier Diversity program covers MBEs, WBEs, LGBTBEs and SDVBEs. There are no MWBE set asides, MWBE aspirational goals, MWBE preference points or MWBE contract goal setting in the City Supplier Diversity program at present. There is no requirement that the City seek quotes from diverse firms for small purchases specifically. Instead, the City Procurement Manual requires that buyers “solicit bids from diverse business on every project.”⁵

⁵ Chattanooga Procurement and Contract Administration Manual, Section 4.02.2.

The City does not have any small business procurement preference program. The City also does not have a separate federally mandated DBE program with separate DBE goals, but instead uses the Tennessee Department of Transportation DBE goals.

The City Procurement Manual requires that the City maintain a database of minority owned vendors.⁶ There were only 24 DBEs in the database in September 2018. The City has a much broader mailing list for disadvantaged firms. The table below shows that there were 1,041 firms on the mailing list in December 2018: 535 minority owned firms (52.6 percent of the combined counts of minority, Females, and veteran owned firms) and 383 Females owned firms (37.7 percent).

The City Procurement Manual calls for the issuance of quarterly diverse business reports, but such a report has yet to be issued.⁷

2. Business Development

The City in-house business development programs have primarily been workshops on insurance, WordPress websites, social media, safety plans for construction, bonding, Small Business Administration (SBA), and 3rd party certification process. In FY 2018, the City, Launch Chattanooga, and Co-Lab collaborated to make Chattanooga a “Kiva City.” Kiva is an online micro lending portal that raises funds from the public to make micro loans to small businesses around the world.

3. Office of Multicultural Affairs (OMA)

The OMA was established in November 2005 by City Ordinance 11767. The Office is part of the Executive Department of The Mayor. The OMA website states that most of the time is spent on outreach and education. The OMA has a staff of two: A Community Outreach Coordinator and a new Multicultural Affairs Coordinator. The OMA FY 2019 projected budget was \$296,975.

The OMA and the Department of Economic and Community Development established a Minority Business Task Force in March 2017 based on Executive Order 2016-1 by the Mayor of Chattanooga. The Task Force met over a year, hosted a minority business forum, and surveyed about 200 local minority business owners.

4. Bonding, Insurance and Prompt Payment

City staff reported that bonding has not been as much of a barrier as insurance. In response the City has hosted workshops on insurance issues.

City staff report that late payments by prime contractors to subcontractors have been a significant barrier and that subcontractors have come to the City seeking relief on this issue

⁶ Chattanooga Procurement Instruction Manual, 2014, Section 4.02.2.b.

⁷ Chattanooga Procurement Instruction Manual, 2014, Section 4.02.2.a.

FINDING 10: PRIVATE SECTOR FINDINGS

The results of the GSPC disparity analysis suggest that any observed disparities in public contracting outcomes between MWBEs and non-MWBEs are not explained by different capacities for public contracting with the City of Chattanooga. These regression specifications control for firm public contracting capacity by including measures for the education level of the firm owner, the age and market tenure of the firm, the size of the firm with respect to the number of employees and revenues, firm bonding capacity, and firm financial standing. This inclusion of these control covariates in the regression specifications permit an assessment of public contracting success/failure conditional on MWBE and non-MWBE public contracting capacity.

The existence of public contracting success disparities between MWBEs and non-MWBEs even after controlling for capacity suggests that relative to non-MWBEs, MWBEs face barriers independent of their capacity—or their ability—in securing public contracts with the City of Chattanooga. Additionally:

1. There are disparities in public contracting outcomes. Relative to non-MWBEs, there is a lower likelihood of MWBEs owned by African Americans, Asian Americans, and Native Americans having won bids for prime contracts with the City of Chattanooga.
2. Any disparities that exist cannot be explained by a differential in MWBE prime contract bid submissions (as compared to non-MWBEs), but can possibly be explained, at least in part, by MWBEs being less likely to have served as prime contractors and subcontractors in the past.
3. The regression model controls and/or proxies for the education level of the firm owner, the age and market tenure of the firm, the size of the firm with respect to the number of employees and revenues, firm bonding capacity, and firm financial standing. None of these factors is driving the disparities between MWBEs and non-MWBEs in the likelihood of winning prime contracts from the City of Chattanooga.
4. In this context, disparity analysis results are also consistent with disparities in winning prime contracts with the City of Chattanooga being driven by discrimination against MWBEs.
5. The existence of public contracting success disparities between MWBEs and non-MWBEs, even after controlling for capacity, suggests that relative to non-MWBEs, MWBEs face barriers independent of their capacity—or their ability—in securing public contracts with the City of Chattanooga.

FINDING 11: ANECDOTAL FINDINGS

GSPC engaged in several different types of anecdotal evidence collection, including responses from the Online Survey of Business Owners, a focus group, two public hearings, review of bid protest documents and interviews with staff and local organizations. Listed below are impressions gathered from the community about the City and diverse contracting.

1. Culture Issues and Discrimination

When asked about discrimination and barriers to minority businesses in Chattanooga doing business with the City of Chattanooga, responses were mixed. Several respondents made note of the positive strides that

the City was making around equity during Mayor Berke's administration and spoke highly of the City's commitment to diversity, however; it was apparent in several forums that the community felt that they had been left behind in the City's economic expansion. Several made comment regarding the City's need for more robust and aggressive efforts surrounding minority business contracting and economic inclusion.

It was noted that there are often anecdotal complaints made about discriminatory experiences around the community but that formal complaints of discrimination are rarely made to the City. Several respondents discussed perceived discrepancies in how diverse communities were viewed and valued by the City. To some, the City took a homogenous approach to diverse businesses, putting them all "in the same bucket" rather than recognizing the unique diversity of cultures. Issues with gentrification and economic opportunity were discussed at length. Some local organizations classed the community as "frustrated" with the status of contracting in the City and the limited opportunities for minority owned and Females owned businesses, diverse workforce, and youth. Several others spoke about a culture of exclusion at play within the City, particularly around downtown Chattanooga, where minority owned firms felt they were not welcome or being denied opportunity.

Furthermore, it was stated that the City has not necessarily focused on developing in minority areas, choosing to focus more on the rapidly gentrifying "hot" areas in town without considering whether "any people of color were at the table," and that this has had an adverse effect on minority business engagement and development.

During the public hearings, the community unrest was palpable with several calling for protests of the City and increased scrutiny of City processes. One respondent noted how the City's lack of action around diverse contracting led to several diverse construction firms and ironworkers being put out of business. Several expressed their opinion that the degradation of African American communities in Chattanooga was purposeful.

Survey Results:

- 37 percent felt that MWBE firms are viewed as less competent (Table 81), and 42 percent agreed or strongly agreed that some prime contractors use MWBEs only as required (Table 82).
- While the City was not seen as actively discriminatory in survey results, over 38 percent of African American business owners and 15.9 percent of Females owned businesses felt they had experienced discrimination in the Chattanooga private sector.
- African American owned firms, Hispanic American owned firms, and Females owned firms reported lower gross revenues than Non-MWBE owned firms, with 40 percent of Caucasian Female owned firms, 44 percent of Hispanic owned firms, and 54 percent of African American owned firms estimating revenues less than \$250,000 in 2018, compared to 60 percent of Non-MWBE owned firms who bring in between \$500,000 and +\$10 million (Table 9). However, collectively,

Caucasian Female owned firms and firms owned by minorities reported commensurate educational outcomes and work experience to those reported by Non-MWBE owned firms (Tables 7-8).

Key Quotes:

- “The reason we don’t have businesses down here [downtown Chattanooga] is because we can’t afford it; they don’t want us down here...when we come to the table to try to get the grant money they’re getting, we run into opposition.”
- “When you go in the business district in Atlanta, it’s a different feel, a different vibe. The powers that be need to see and understand how diversity can impact the local economy.”
- “The community is expanding and they’re not taking us (diverse communities) with them.”
- “People don’t like to be forced to do anything, so they will push for what they want because they didn’t want to use DBE firms anyway.”

2. Barriers to Diverse Businesses

There was widespread consternation regarding the City’s unwillingness or inability to provide set-asides for disadvantaged businesses that often related to dissatisfaction about the certification process. During the GSPC Focus Group, several questioned the utility of the City’s DBE certification, noting that the lack of business opportunity took away their incentive for completing several different time-consuming certifications. When asked if certification has been helpful, one participant said that it was simply “a lot of paperwork” without many benefits besides “a little credibility.”

Respondents identified that they were willing to do business with the City of Chattanooga, but some participants identified a lack of education about the procurement processes and the City’s unwillingness to provide opportunities to small and minority firms as reasons for the perceived lack of minority participation. Furthermore, many felt that prime contractors only considered using MWBE or DBE firms if they were required.

Several others stated their belief that a lack of networks and social capital among minorities impacted their ability to break into the market. This was echoed by business owners who referenced the presence of a “Good Ole Boy” network, reporting that the same firms were used over and over again, and these relationships created competitive advantages with buyers for informal contracts. Business owners also discussed the unfairness of having to compete with larger firms for contracts as an impediment to diverse firms.

While the costs of starting a business in Chattanooga are lower than average, minority businesses have difficulty accessing capital and lack the resources as both a consumer base and a source of capital. Other participants spoke about the need for business education, network building, financing, mentoring, and the other requirements for business growth for small and minority owned firms.

Survey Results

- 99.5 percent of survey respondents reported that they are willing to contract with the City, but roughly 17% were unsure if they are qualified to do so (Survey Tables 12-13).
- 44.5 percent of respondents are not currently registered with the City, despite being willing to do business with Chattanooga and despite higher numbers being registered with other government entities such as Hamilton County, Metro Nashville Government, the State of Tennessee, and the Tennessee Department of Transportation (Survey Tables 14-15).
- Of the vendors who are not registered with the City, over half (52 percent of unregistered respondents) report “Not knowing there was a registry” and another 22 percent report “Not knowing how to register.” (Tables 16-22)
- Roughly 48 percent of all respondents across all demographics believe that there is an “informal network of prime and subcontractors doing business with the City” and monopolizing public contracting. Caucasian Female owned firms, African American owned firms, and Native American owned firms had the highest affirmative response to this statement at 64 percent, 44 percent, and 75 percent respectively (Table 75)

Key Quotes:

- “You can only get to that [non-competitively bid contracts] if there is a good relationship with the buyer.”
- “The same people win those contracts over and over and over again.”

3. MWBE Program and Monitoring

The City of Chattanooga’s DBE program was established by Executive Order and consists solely of race neutral approaches. The programs primary focus consists of outreach and certification. The program does not have formal structure or procedural guidelines established by policy and is housed under the Office of Multicultural Affairs, which does not routinely engage in economic development or contract compliance. While there are some efforts to promote MWBE utilization in public contracting, there were several references to gaps in the City strategy, including the need for a program “with teeth” and other policies that incentivize the use of MWBE contractors. While the City staff were generally thought of as “nice,” they were perceived as not helpful when seeking more information about the contracting process.

Key Quotes

“What drives the departments to consider DBE firms without an incentive?”

4. **Other Barriers to Participation**

- Transparency
- Capital Access
- Outreach
- Oversight and Monitoring
- Locating Opportunities/Navigating the City website

A. **COMMENDATIONS**

Within the Disparity Study process, GSPC is careful to look for opportunities to highlight the successes and advancements being made through equitable processes and diverse contracting initiatives. The set of commendations below are areas where GSPC believes the City of Chattanooga and its staff should be noted for their contributions to inclusion and equity.

1. **Culture and Commitment by Current Administration**

Despite this study identifying disparities in diverse business utilization by the City, GSPC does commend Mayor Berke and the City's current administration for acknowledging the presence of potential disparities in the Chattanooga marketplace and attempting to address them. Using the tools that were legally permissible under the Croson framework, the current administration created the Office of Minority Affairs, enacted an Executive Order issuing an encouragement to utilize diverse businesses, and ultimately conducted this disparity study.

As previously noted, the presence of these disparities cannot be attributed to a causal relationship between any one individual or administration. On the contrary, these disparities are a manifestation of what is considered "the present effects of past discrimination", a convergence of historical societal de facto and de jure segregation and discrimination, which has had an impact on the economic opportunity of diverse communities and businesses. In addition, the anecdotal evidence, supported by disparity ratios and survey data suggest current discrimination as well.

2. **Office of Multicultural Affairs (OMA) Staff**

Staff with OMA are active in the community, regularly coordinating community events to enrich the experiences of diverse people groups across the City. The Office's director was instrumental in galvanizing the City efforts around supplier diversity, with many community members referencing his influence for bringing awareness to the issue and helping them get certified as a vendor with the City. OMA staff were also very helpful in coordination of the Study outreach, helping the GSPC team identify community stakeholders and appropriate venues for community events.

3. Increased Vendor Training and Outreach

At the conclusion of the study, the GSPC team was made aware that the City has been actively engaging in more outreach sessions to the diverse business community to make this community aware of upcoming procurement opportunities. This speaks directly to Recommendations 4 and 6 below and the City should be commended on its assertiveness to respond to an identified need in its supplier diversity engagement strategy.

B. RECOMMENDATIONS

As demonstrated by the findings above, GSPC has determined that the City of Chattanooga has a compelling governmental interest in the development of a race- and/gender based remedial program. While several diverse contracting initiatives have been promoted by the City in the past, they have been limited to race-neutral approaches because of the lack of a factual predicate for race conscious programs. These race neutral programs have failed to make a significant impact on disparities in the marketplace for diverse firms.

Based on this study's findings, GSPC has crafted these recommendations and steps for implementation as a guide as to what the City must address to respond to the underutilization of MWBE businesses. The legal basis for these recommendations is contained in the expanded Legal Analysis in Appendix A.

RECOMMENDATION 1: FORMAL MWBE PROGRAM LEGISLATION

While the City currently operates a DBE program, this program was established by Executive Order and is loosely administered with a primary focus on outreach and certification. A robust MWBE policy is necessary to establish the evidentiary basis for race conscious action while also clearly defining roles, responsibilities and regulations for administrative staff. This new policy would clearly identify the factual basis for such program (the findings of this Study) while clearly defining program goals and objectives, staffing responsibility and procedures, diverse participation goals, the goal setting process and relationships to the City purchasing department.

It has been GSPC's experience that MWBE programs that lack clear procedures and regulations often struggle to obtain overall programmatic objectives. These guidelines are necessary for giving policymakers the clarity needed to interpret the success and efficiency of the program and gives administrators and program personnel clarity on how to perform the work.

With several cities currently in the midst of procurement reform efforts to reconcile compliance programs and purchasing activity, the City of Chattanooga has an opportunity to build a program that seamlessly bridges the gap between the two. Any resulting program should also include the foundational components

of successful supplier diversity programs: Vendor Assessment, Outreach, Certification and Verification, Effective Procurement and Monitoring in order to ensure successful operation.

Best practices dictate that this program is often an independent office outside of purchasing to maintain the integrity of oversight and compliance while also having platform and visibility to the City's executive leadership.

RECOMMENDATION 2: STAFFING AND RESOURCES

In addition to providing a reasonable operating budget for the program, staff is critical to any successful program. While these programs traditionally need at least three (3) staff to function at optimal effectiveness, GSPC recommends that the City begin with hiring one (1) full-time experienced, professional Contract Compliance Officer to lead a Contract Compliance Department and allow that person to develop a program, and then hire additional staff.. This Contract Compliance Officer could also work in concert with the City's Chief Equity officer and the Office of Minority Affairs. The descriptions of these roles would be as follows with a full three (3) person department:

- a) Chief Diversity Officer – Best practices are that the person in this position oversee all areas of diversity for the City, including procurement and work force. This has recently been done in the City of Memphis and Metropolitan Nashville and Davidson County, Tennessee, with positive results.
- b) Contract Compliance Officer: Responsibilities include: forecasting, outreach, certification review, maintaining availability lists, coordinating supportive services, and coordinating with other agencies.
- c) Contract Administration: Responsibilities include: prebid conferences, working with MWBE/VOB/SDVOBs to make sure they are bidding, investigation of Good Faith Efforts, tracking participation, and reporting participation.

RECOMMENDATION 3: STAFF TRAINING

In order to assist in responsible program administration, GSPC also would recommend ongoing staff training through platforms such as the American Contract Compliance Association, to keep City personnel abreast of national innovations and best practices in promoting MWBE contracting in City government.

In the Anecdotal process, GSPC also heard concerns that businesses felt they had been treated unfairly, had been openly discriminated against, and were generally not considered a priority constituency by the City of Chattanooga. While GSPC cannot corroborate any allegations of improper behavior by the City, GSPC would encourage the City to explore mandatory racial equity training for City personnel and additional contract compliance training for purchasing staff.

RECOMMENDATION 4: CONTRACT FORECASTING

Planning is important for governments seeking to identify and solicit available MWBE businesses. Effective remedial programs begin with understanding what services and goods the City will be looking to procure in the upcoming fiscal cycle. Forecasting provides opportunity for both the City and business community. For the City, forecasts or buying plans allow them to engage in strategic community outreach by enabling the City's procurement and contract compliance/MWBE program staff to identify and engage available firms around upcoming opportunities. This can manifest in best practices like networking events and pre-bid conferences where potential prime contractors can meet potential subcontractors.

For business owners, especially small and diverse businesses, being notified about bid opportunities ahead of time allows them to more strategically deploy resources and allocate time needed to prepare and respond to bid opportunities. Forecasting neutralizes the impact of informal networks ("colloquially known as the Good Ole Boys network) by equalizing the flow of information---something that often places small and diverse firms at a competitive disadvantage in the bid process.

The City can also use this information to encourage Teaming and Joint Venturing for smaller firms allowing them time to strategize on how to pool resources to bid on larger contracts.

RECOMMENDATION 5: CONTRACT DEBUNDLING

Through the Study threshold analysis, GSPC was able to illustrate that the majority of City purchase orders are small dollar purchases. With a median contract size of \$3,600 and an average contract size of \$109,200.¹³, GSPC determined it is unlikely that large contract size would prevent smaller firms from performing as prime contractors on City of Chattanooga contracts.

Further complicating this issue is that 1.45 percent of all contracts (\$1 million and over) make up 78.93 percent of all City spending and less than one half of one percent of all contracts (.32 percent, valued over \$5 million) account for more than half (57.19 percent) of all spending by the City during the Study Period. Because the City awarded several large dollar contracts, it decreased the number of opportunities for small firms to perform as prime contractors. Very large contract scopes increase the need for significant working capital and bonding capacity to bid, limiting bidders to only large firms, Chattanooga's available small and diverse vendor community in the instances in which large contracts are procured are left to compete only for any available subcontracting scopes of work.

De-bundling is a best practice for creating more opportunity for small and diverse firm by taking a large scope and dividing it into several smaller scopes. The City should work with staff in development of project specifications to explore ways to de-bundle contracts. This will help to promote opportunity and competition by permitting smaller firms to compete for contract scopes that otherwise would only have been performed by a large prime contractor, presumably better positioning small and MWBE firms to grow their businesses. .

RECOMMENDATION 6: COORDINATED VENDOR OUTREACH

Outreach is a critical component of a successful supplier diversity program. As previously noted, identifying and connecting with available firms is critical to building awareness of bid opportunities and increases the likelihood of attracting diverse bidders. First, the City will need to identify local MWBE firms who may be interested in becoming suppliers for City procurements. Because the City did not previously have a formal MWBE program, there was little incentive for MWBE/DBE firms to get certified with the City (as evidenced by significant gaps in self-identified MWBE firms on the City vendor list and certified DBE firms on the City certified list.) We recommend an outreach campaign to both build awareness about future supplier diversity efforts by the City and communicate the benefits of registration/certification and encouragement to get vendors certified.

While GSPC recognizes that the City may not have the bandwidth to engage in a robust campaign in the early stages of the program, the City efforts should be supplemented by using the City's forecasting process to build a schedule of anticipated City purchases. With this outreach tool, the City can strategically engage MWBE businesses around these opportunities. Along with active engagement with local trade and business organizations, the City could partner to host trainings and outreach events or disseminate information about upcoming bid opportunities. These strategic partnerships could allow the City to make progress in building its pool of available vendors through referring and training businesses interested in public contracting to the City.

As a starting point, the City may want to explore partnerships with the local Chamber of Commerce, the SBA, ethnic Chambers of Commerce, and other trade groups. Similar partnerships can be critical in building the City's economic ecosystem, a strategy discussed in more detail in Recommendations 7 and 8.

RECOMMENDATION 7: RECIPROCAL CERTIFICATION

Having a robust certification process is critical to ensuring that firms do not have an avenue to engage in certification fraud. In an MWBE program, vendors should be clearly and confidently identified to remove business fronts and pass throughs which are businesses falsely identifying as MWBE businesses to gain benefit from an MWBE goals program. While the City currently certifies DBE firms, there is no supporting program, good faith efforts process, or mechanism to encourage DBE participation in the contracting process.

Conducting certification review is a labor-intensive responsibility that should involve documentation, desk audits, and site visits to businesses. Because there has been no program in Chattanooga, local businesses communicated that they did not see the utility in registering for another certification with the City. Furthermore, several saw the certification as being significantly less detailed than some other more recognized certifications. With a small office and limited staff, GSPC would recommend establishing a reciprocal certification process or accepting third party certifications from a verified source, such as the State of Tennessee's GoDBE Program.

RECOMMENDATION 8: COORDINATED SUPPORTIVE SERVICES ECOSYSTEM

The local business community and organizations spoke at length about the need for business training and education. With expansion of the City's economic opportunities, taking an approach focused on building local small and diverse businesses to capitalize on the economic opportunity within the City is a great approach to address economic opportunity in diverse communities, address disparities in revenue for diverse businesses, promote a diverse workforce and build a more robust tax base for the City.

An emerging best practice involves the City serving as a coordinator of community resources involving everything needed for everything from startups and early stage businesses to scalable businesses. In this role, the City would partner with the surrounding ecosystem to recruit and train tomorrow's workforce and entrepreneurs. Assessing needs of existing businesses and connecting them with service providers for business for growth. Supportive services may be offered internally or in coordination with other agencies, and can involve everything from business incubators, estimating classes and networking to capital assistance programs with local banks and Community Development Financial Institutions (CDFIs). Some potential partners are the Entrepreneur Center, the Small Business Administration, or the Chattanooga Center of the Tennessee Small Business Development Center (ChSCC-TSBDC).

RECOMMENDATION 9: SUBCONTRACTOR UTILIZATION TRACKING

The City currently does not track subcontractor utilization in any form. For future projects, the City should be sure to capture all proposed subcontractors in bid documents during the proposal process. From there the City should properly document subcontractor award amounts or payments through periodic project updates from the prime contractor (as a part of the invoicing process, or contract closeout documents and affidavits) or the use of contract compliance software. The City should gather this data for all proposed subcontractors, including Non-MWBE/DBE firms across all work categories for accurate reporting of MWBE/DBE subcontractor participation.

RECOMMENDATION 10: MWBE SUBCONTRACTING GOALS (CONSTRUCTION)

GSPC was only able to identify minimal MWBE participation in Chattanooga prime contracting and Construction subcontracting over the Study Period. Minority groups did not register any subcontracting utilization during the entire Study Period and Females owned firms were underutilized to a degree.

Based upon these wide disparities, GSPC recommends a robust race, gender and ethnicity-based subcontractor program that includes both weighted contract goals and annual aspirational goals in Construction. Despite GSPC also identifying underutilization in Professional Services for MBE firms, the low overall dollars identified in Professional Services and A&E subcontracting prevents GSPC from recommending race- or gender-conscious subcontracting goals in A&E and Professional services, including MWBE firms in Professional Services and A&E subcontracting program. The MWBE contract goals should be based upon the combined availability of all ethnic groups, in order to gain an incentive for Prime Contractors to utilize firms owned by all ethnic minority groups. However, it is equally important for the

City to closely monitor participation to adjust goals, if necessary, if the balance of the utilization of minority groups is not in accordance with the individual race/ethnicity group availability.

For example, the City may include a contract goal of 20 percent on Construction projects for MBEs; but if at the end of the first quarter of the year, Hispanic American owned firms have been averaging 10 percent, despite having a significantly lower availability, while African American owned firms are averaging 5 percent with a higher availability, then the City would adjust contract goals going forward to specifically include goals for African American owned firms on projects where there are substantial subcontracting opportunities and availabilities within the African American business community. Further, the contracts that goals are placed on should be any contracts that are \$250,000 or more in Construction on the construction portion of design build projects.

Because the City only achieved .23 percent MWBE utilization in Construction over the Study Period, GSPC recommends the City taking a phased approach over the next three (3) years to meet full availability in the goal setting process. Once the program is established and administrators are hired, GSPC recommends launching goals at 50 percent of availability, moving to 75 percent of availability by year two (2) and full availability by year three (3).

RECOMMENDATION 11: PROMPT PAYMENT POLICY

In conjunction with the City's MWBE program ordinance, GSPC recommends that the City utilize a prompt pay ordinance for its prime contractors. This is particularly important, because it assists small businesses in meeting their financial obligations and allows them to build working capital.

RECOMMENDATION 12: NEGOTIATED ECONOMIC DEVELOPMENT SUBCONTRACTOR GOALS

While it was not discussed at length, GSPC heard anecdotally that several private entities wield significant influence in the City's economic development. With the disparities identified in the Chattanooga private sector, the City may want to eventually explore programmatic elements to encourage MWBE participation on non-City projects. Some of the ways this can be accommodated is through the use of negotiated MWBE goals programs on development projects receiving City funding or tax incentives. Some cities, including the City of Chicago, also have a private sector MWBE bid incentive where firms are given credit towards future City goals by contracting with diverse firms in the private sector.

RECOMMENDATION 13: DATA RECOMMENDATIONS

GSPC recommends the following updates to the City's data procedures:

- The City does not actively maintain bidder data for all procurements. The City should standardize and require maintenance of bidder records for bid transparency. When at all possible, bid tabs should also be made public and the City should engage.
- The City currently does not track either proposed MWBE and Non-MWBE subcontractors. The city should begin capturing all proposed subcontractors and tracking subcontractor payments.
- The City should explore more seamless integration of the external vendor registry system and the internal Supplier list to better track MWBE spending, internally.
- The External vendor registry system should allow for input of any certifications they have received for verification by City staff and then put into internal database.
- The minority flag in the City's Oracle eBiz database should be based on a verified and accepted certification. Several Minority flags were determined to be inaccurate when cross referenced for the Study.
- The City's External vendor registry system should have vendors identify a single primary commodity code, and a limited number of secondary codes. In several cases vendors were excluded from the analysis because of registering for too many codes across broad categories, limiting GSPC's ability to identify the service they provided.

C. CONCLUSION

While the City has recently given an increased focus to issues of diversity, inclusion and supplier diversity, the Study illustrates where the City has room to make significant improvement. With a thriving and expanding local economy, MWBE firms reported feeling marginalized from participating in the City's growth, an anecdote proven true by the study's MWBE utilization. Without a well-defined program preceding this Study, there was no consistent benchmark on which to base proper expectations or measures of participation in City procurements. With the City's stated intent to diversify its contractors, suppliers, and vendors, the City can now move forward with data and tools to meet those objectives.

The depth of the disparity in public contracting and private markets found by GSPC in Chattanooga is not based on one moment in time, specific individual, or administration, but a cumulative history. With a local economy seeking to continue its growth, increasing opportunities for businesses owned by people of color through economic development and supplier diversity are priorities in building equitable and sustainable communities. With this focus on the future, GSPC has developed these recommendations and will support the City by making every effort to assist in the creation of a more equitable Chattanooga.

III. LEGAL ANALYSIS

The analysis contained throughout this Study underscores the several purposes for which such a study may be done, the importance of methodological soundness, and the usefulness of the data and other information contained therein. Disparity studies can provide historical context regarding government procurement practices, a contemporary snapshot of current procurement practices, and a predictive preview of future challenges/needs.

There is also, however, an important historical legal basis for the advent of disparity studies in the first instance. The bedrock judicial decisions from the United States Supreme Court anticipating and inviting increased use of disparity studies are therefore discussed first in the following legal analysis, before digging deeper into the legal considerations and related evidentiary requirements for sustaining an MBE/WBE program in the face of a challenge on constitutional grounds.

GSPC has also included in the historical analysis a significant decision of the United States Court of Appeals for the Sixth Circuit, as this decision demonstrates the continuing significance and vitality of the featured Supreme Court precedent and highlights the legal foundation under which any federal challenge to the City of Chattanooga DBE program will be analyzed.⁸

A. Development of the Relevant Law

The outgrowth of disparity studies was in large measure a response to constitutionally based legal challenges made against federal, state, and local minority business enterprise programs enacted to remedy past or present discrimination (whether real or perceived).

Such studies were effectively invited by the United States Supreme Court in rendering its seminal decision in City of Richmond v. J.A. Croson Company, 488 U.S. 469; 109 S. Ct. 706; 102 L. Ed. 2d 854 (1989), and subsequent judicial decisions have drawn a direct line between Croson and the utilization of disparity studies. See, for example, Adarand Constructors, Inc. v. Slater (Adarand III), 228 F.3d 1147, 1172-73 (10th Cir. 2000) (“Following the Supreme Court’s decision in Croson, numerous state and local governments have undertaken statistical studies to assess the disparity, if any, between availability and utilization of minority owned businesses in government contracting.”).

Disparity studies have therefore become an important tool for governmental entities in deciding whether to enact minority business programs or legislation and in justifying existing programs or legislation in the face of constitutional challenge. To better understand the proper parameters of such programs, one must understand their judicial origin.

⁸ As discussed in the Policy chapter of this report, though the City of Chattanooga often references the program as a “DBE” program, careful review shows that the underlying purpose of the program is to address availability and utilization of MBE and WBE firms, effectively making it an MBE/WBE program.

1. **The Supreme Court's Decision in City of Richmond v. Croson**

To fully appreciate the usefulness of disparity studies for development and defense of minority business programs, an overview of the Croson decision is helpful.

Laws that, on their face, favor one class of citizens over another, may run afoul of the Equal Protection Clause of the Fourteen Amendment. MBE/WBE programs and legislation are among the types of laws invoking such concerns. Depending on the nature of the differentiation (e.g., based on race, ethnicity, gender), courts evaluating the constitutionality of a minority business program will apply a level of judicial scrutiny. As explained at greater length below, race-based programs are evaluated under a “strict scrutiny” standard, and gender-based programs may be subject to strict scrutiny or be under a less-rigorous “intermediate scrutiny” standard, depending on the federal circuit within which the entity sits.

In its Croson decision, the Supreme Court ruled that the City of Richmond's Minority Business Enterprise (hereinafter “MBE”) program failed to satisfy the requirements of “strict scrutiny.” “Strict scrutiny” review involves two co-equal considerations: first, the need to demonstrate a compelling governmental interest; second, implementation of a program or method narrowly tailored to achieve/remedy the compelling interest. In Croson, the Supreme Court concluded that the City of Richmond failed to show that its minority set-aside program was “necessary” to remedy the effects of discrimination in the marketplace.

In fact, the Court found that the City of Richmond had not established the necessary factual predicate to infer that discrimination in contracting had occurred in the first place. The Court reasoned that a mere statistical disparity between the overall minority population in Richmond (50 percent African American) and awards of prime contracts to minority owned firms (0.67 percent to African American firms) was an irrelevant statistical comparison and insufficient to raise an inference of discrimination.

Addressing the disparity evidence that Richmond proffered to justify its MBE program, the Court emphasized the need to distinguish between “societal discrimination,” which it found to be an inappropriate and inadequate basis for social classification, and the type of identified discrimination that can support and define the scope of race-based relief.

Specifically, the Court opined that a generalized assertion of past discrimination in an entire industry provided no guidance in determining the present scope of the injury a race-conscious program seeks to remedy, and emphasized that “there was no direct evidence of race discrimination on the part of the City in letting contracts or any evidence that the City's prime contractors had discriminated against minority owned subcontractors.”⁹

⁹ Croson, 488 U.S. at 480.

Accordingly, the Court concluded there was no prima facie case of a constitutional or statutory violation by anyone in the construction industry that might justify the MBE program. Justice O'Connor nonetheless provided some guidance on the type of evidence that might indicate a proper statistical comparison:

[W]here 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. [Croson, 488 U.S. at 509]

Stated otherwise, the statistical comparison should be between the percentage of MBEs in the marketplace qualified to do contracting work (including prime contractors and subcontractors), and the percentage of total government contract awards (and/or contractual dollars paid) to minority firms. The relevant question among lower federal courts has been which tools or methods are best for such analysis -- a matter addressed in the detailed discussion of statistical comparison provided below.

Additionally, the Court in Croson stated that identified anecdotal accounts of past discrimination also could provide a basis for establishing a compelling interest for local governments to enact race-conscious remedies. However, conclusory claims of discrimination by City officials, alone, would not suffice, nor would an amorphous claim of societal discrimination, simple legislative assurances of good intention, or congressional findings of discrimination in the national economy. In order to uphold a race- or ethnicity-based program, the Court held, there must be a determination that a strong basis in evidence exists to support the conclusion that the remedial use of race is necessary.

Regarding the second prong of the strict scrutiny test, the Croson Court ruled that Richmond's MBE program was not narrowly tailored to redress the effects of discrimination. First, the Court held that Richmond's MBE program was not remedial in nature because it provided preferential treatment to minorities such as Eskimos and Aleuts, groups for which there was no evidence of discrimination in Richmond. Thus, the scope of the City's program was too broad.

Second, the Court ruled that the thirty percent (30 percent) goal for MBE participation in the Richmond program was a rigid quota not related to identified discrimination. Specifically, the Court criticized the City for its lack of inquiry into whether a minority business, seeking racial preferences, had suffered from the effects of past discrimination.

Third, the Court expressed disappointment that the City failed to consider race-neutral alternatives to remedy the under-representation of minorities in contract awards. Finally, the Court highlighted the fact that the City's MBE program contained no sunset provisions for a periodic review process intended to assess the continued need for the program.¹⁰

¹⁰ Croson, 488 U.S. at 500.

Subsequent to the decision in Croson, the Supreme Court and the federal Circuit Courts of Appeal have provided additional guidance regarding the considerations, measurements, information, and features surrounding an MBE/WBE program which will assist in protecting the program from constitutional challenge under a strict scrutiny analysis. These recommendations have in many respects provided a roadmap of sorts for useful disparity studies and are therefore discussed in greater detail below.

2. The Supreme Court's Decision in Adarand v. Peña and Subsequent Circuit Court Proceedings

Six years after its decision in Croson, the Supreme Court was again confronted with an equal protection challenge to a minority business program, in Adarand Constructors, Inc. v. Peña, 515 U.S. 200 (1995) (Adarand II). This time, however, the program under challenge was enacted by the federal government, thus implicating the Fifth Amendment rather than the Fourteenth Amendment analysis required for the local (state) program in Croson.

Reversing the decision of the Tenth Circuit, the Supreme Court ruled that federal programs are not reviewed for constitutionality under a more lenient standard (as had been indicated in some prior Supreme Court opinions); strict scrutiny is likewise to be applied to such programs.¹¹ Because the district court and the Tenth Circuit had not applied the proper standard of review, the Supreme Court remanded the case back to the district court to apply strict scrutiny to the program, consistent with Croson.¹²

On remand, the district court (D. Colo.) essentially ruled that no program can meet the strict scrutiny standard --- i.e., it is "fatal in fact." The Tenth Circuit disagreed, upholding the federal program even under a strict scrutiny standard, finding a compelling state interest, and the required narrow tailoring to achieve such compelling interest. Adarand Constructors, Inc. v. Slater, 228 F.3d 1147 (10th Cir. 2000) (Adarand III).

Consistent with Croson and subsequent opinions, the Tenth Circuit described its task regarding the compelling state interest as follows:

[O]ur inquiry necessarily consists of four parts: First, we must determine whether the government's articulated goal in enacting the race-based measures at issue in this case is appropriately considered a "compelling interest" under the governing case law; if so, we must then set forth the standards under which to evaluate the government's evidence of compelling interest; third, we must decide whether the evidence presented by the government is sufficiently strong to meet its initial burden of demonstrating the compelling interest it has articulated; and finally, we must examine whether the challenging party has met its ultimate burden of rebutting the government's evidence such that the granting of summary judgment to either party is proper. We begin, as we must, with an inquiry into the meaning of "compelling interest." [Adarand III, 228 F.3d at 1164]

¹¹ Id. at 222-26.

¹² Id.

If satisfied that the compelling state interest prong had been met, the court then needed to determine whether the federal DBE program was narrowly tailored, as required under Croson (and strict scrutiny jurisprudence generally).¹³

The court first found that the government's proffered interest – “remedying the effects of racial discrimination and opening up federal contracting opportunities to members of previously excluded minority groups” – met the standard.¹⁴

As for the “strong basis in evidence” that remedial action was necessary, the court in Adarand III found that the government established that minority contractors faced significant discriminatory barriers to entry into the disbursement programs, such as a classic “old boy” network of contractors, denial of access to capital, and denial of or difficulty in obtaining union membership to assist in access.¹⁵ The government also demonstrated, the court found, that existing minority contractors faced barriers to competition, owing to various methods of “discrimination by prime contractors, private sector customers, business networks, suppliers, and bonding companies[.]”¹⁶

In support of its position, the government produced statistical and anecdotal evidence, both direct and circumstantial, taken from local disparity studies which demonstrated under-utilization of minority subcontractors (described in more detail below), and the effect on utilization rates when affirmative action programs or efforts were discontinued for one reason or another.¹⁷

The Court went on to discuss at length its reasoning that the government also adequately demonstrated that its program was narrowly tailored to achieve the compelling interest discussed previously.¹⁸ In summary, the Court found that the government satisfactorily met the following important factors: “the necessity for the relief and the efficacy of alternative remedies; the flexibility and duration of the relief, including the availability of waiver provisions; the relationship of the numerical goals to the relevant labor market; and the impact of the relief on the rights of third parties.”¹⁹

The case was therefore returned to the district court for further proceedings “consistent with this opinion.”²⁰

¹³ Id. at 1176-77.

¹⁴ Id. at 1164-65 (“[W]e readily conclude that the federal government has a compelling interest in not perpetuating the effects of racial discrimination in its own distribution of federal funds and in remedying the effects of past discrimination in the government contracting markets created by its disbursements.”).

¹⁵ 228 F.3d at 1168-69.

¹⁶ Id. at 1170-72.

¹⁷ Id. at 1174-75.

¹⁸ 228 F.3d at 1176-1187.

¹⁹ Id. at 1177. These remedial concepts are covered in greater detail below.

²⁰ Id.

3. The Sixth Circuit's Decision in *Associated General Contractors v. Drabik*

Having the benefit of the Supreme Court's thinking in *Croson* and *Adarand*, the Sixth Circuit addressed the constitutionality of the State of Ohio's minority business enterprise statute ("MBEA") in *Associated Gen. Contrs. of Ohio, Inc. v. Drabik*, 214 F.3d 730, 735 (6th Cir. 2000), an opinion which remains among the most significant MWBE appellate decisions in the Circuit covering the City of Chattanooga.

In *Drabik*, the Court of Appeals affirmed the district court's finding that Ohio's MBEA was not narrowly tailored to remedy past discrimination. The court found the statute lacked narrow tailoring because (1) the MBEA suffered from under-inclusiveness and over-inclusiveness, (lumping together racial and ethnic groups without identified discrimination); (2) the MBEA lacked a sunset date; and (3) the state failed to provide specific evidence that Ohio had considered race-neutral alternatives before adopting the plan to increase minority participation.²¹

Specifically, the court ruled that the State of Ohio failed to satisfy the strict scrutiny standard to justify the state's minority business enterprise act by relying on statistical evidence that did not account for which firms were qualified, willing and able to perform on construction contracts.²² The court stated that "although Ohio's most compelling statistical evidence compares the percentage of contracts awarded to minorities to the percentage of minority owned businesses...the problem is that the percentage of minority owned businesses in Ohio (7 percent of 1978) did not take into account which were construction firms and those who were qualified, willing and able to perform on state construction contracts."²³ Although this was more data than was submitted in *Croson*, it was still insufficient under strict scrutiny, according to the court.²⁴

Drabik thus underscores that MWBE Programs must be designed so that the benefits of the programs are targeted specifically toward those firms that faced discrimination in the local marketplace. To withstand a challenge, relief must extend only to those minority groups for which there is evidence of discrimination.²⁵

Finally, expressly relying on *Croson*, the *Drabik* Court cited the requirement that there not only be a strong basis in evidence for a conclusion that there has been discrimination, but also for a conclusion that the remedy is made necessary by the discrimination. In other words, there must be a "fit" between past/present harm and the remedy.²⁶

²¹ *Drabik*, 214 F.3d 739.

²² *Id.* at 736.

²³ *Id.*

²⁴ *Id.*

²⁵ See *Drabik*, 214 F.3d at 735.

²⁶ *Id.* at 730 ("outdated evidence does not reflect prior unremedied or current discrimination").

B. CONCLUSION

The Croson decision, handed down more than 25 years ago, continues to cast a long shadow over MBE/WBE programs and legislation. Croson certainly changed the face of remedial programs, but it merely set the standards to be applied, leaving open questions regarding the acceptable or proper methodologies for achieving such standards. There is guidance in Croson itself, to be sure, and significant refinement by the Supreme Court and the federal Circuit Courts of Appeal in its aftermath, but there nonetheless remains significant uncertainty and fluidity in the law governing such programs to this day.

IV. PURCHASING PRACTICES, POLICIES AND PROCEDURES

The objective of the “Purchasing Practices, Policies, and Procedures” chapter of this Study is to review the stated policies and practices of the City of Chattanooga (“City”) in relation to purchasing and programs to enhance inclusion of minority owned, Caucasian Female owned, and disadvantaged owned businesses.

It is well understood that where there is policy, there is often room for interpretation and discretionary practice. These areas will be examined closely, as well, for any effect they may have on the overall ability of Minority and Females Business Enterprises (“MWBES”) as to obtain work with Chattanooga. The focus for this discussion is Chattanooga’s Supplier Diversity program. The City uses the term Disadvantaged Business Enterprises (“DBEs”) to refer to MWBES as well as Service-Disabled Veteran Owned Businesses (“SDVBE”) and Lesbian Gay Bisexual and Transgender Business Enterprises (“LGBT”/“LGBTBES”).

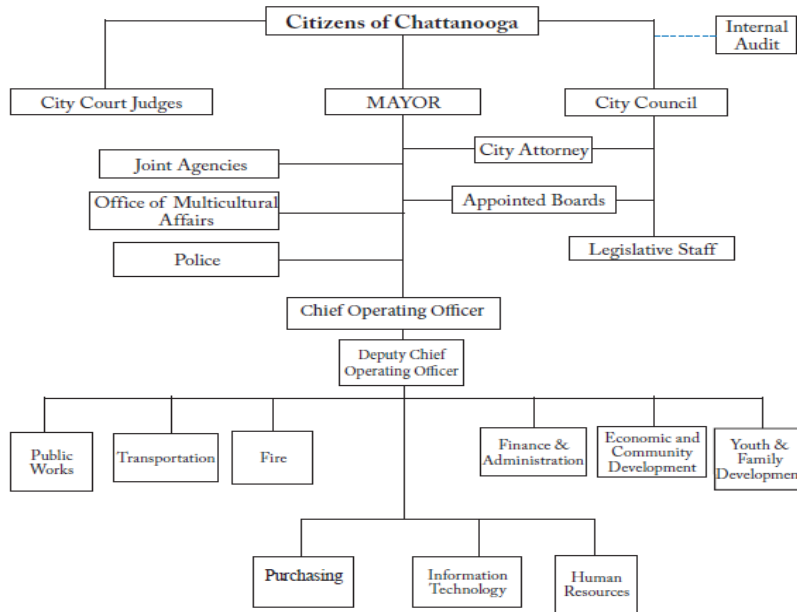
A. Document Review and Personnel Interviews

GSPC reviewed City ordinances, the Tennessee Code, past and present City Supplier Diversity programs and recommendations, City purchasing manuals, Chattanooga bid and proposal solicitations, past and present Chattanooga budgets, legal memoranda, and related documents. GSPC conducted policy interviews in the fall of 2018 with officials who engage regularly in purchasing from the following City departments and offices:

- Purchasing
- Public Works
- Citywide Services (Public Works)
- Parks Maintenance (Public Works)
- Fleet (Public Works)
- Legal
- Office of Multicultural Affairs
- Supplier Engagement Coordinator

The organization chart in the figure below shows the relationship between these departments:

Table 16: City of Chattanooga Organizational Chart
City of Chattanooga Disparity Study



Source: Chattanooga, Comprehensive Annual Budget Report for the Year Ending June 30, 2019, page 32.

B. Overview of Chattanooga Purchasing

1. Procurement Methods

The table below shows the method of procurement by contract threshold.

Table 17: Contract Threshold and Procurement Method
City of Chattanooga Disparity Study

Price Threshold	Method of Procurement	Notes
\$1 to \$1,000	Informal Purchases	Buyer not required to publicly advertise or obtain competitive quotes. Quotes can be solicited verbally or by phone.
\$1 to \$1,000	Purchase Card	Delegated purchase authority, limited to \$1,000 per transaction, generally less than \$25,000 per month.
\$1,001-\$24,999	Informal Purchases	Three competitive written quotes required. Special purchase approval required for furniture, vehicles, and information systems
\$25,000 or more	Competitively bid and publicly advertised.	Only the Purchasing Division can publicly advertise City procurement needs.

Source: Chattanooga Procurement Instruction Manual, 2014, Sections 2.02 through 2.06.

There is no requirement that the City seek quotes from diverse firms for small purchases specifically. Instead, the City Procurement Manual requires that buyers “solicit bids from diverse business on every project.”²⁷ The City Procurement manual requires advertisement in the minority community for solicitations of \$25,000 and above, including: local advertising businesses and agencies, The Chattanooga News Chronicle (minority owned), the Chattanooga Chamber of Commerce, and The Urban League.²⁸ The City Purchasing Department is also required to refer to the Tennessee Minority Supplier Development Council and the Chattanooga Minority Contractors Association for potential vendors. Finally, the plan holders list is posted under each project, and plans can be reviewed for free at the American General Contractors Association (‘AGC’) and the City Purchasing Division.

The next tables show the various procurement methods listed in the City Procurement Manual.

²⁷ Chattanooga Procurement and Contract Administration Manual, Section 4.02.2.

²⁸ Chattanooga Procurement and Contract Administration Manual, Section 4.02.1.a.

Table 18: Other Procurement Methods
City of Chattanooga Disparity Study

Procurement Methods	Comments
Request for Proposal	<p>A method of negotiated source selection when the City anticipates:</p> <ol style="list-style-type: none"> 1. Contract award will be based upon the best overall quality proposal. 2. Evaluation criteria established and included in the RFP specifications. 3. Proposals may be reviewed by an evaluation committee. 4. Proposal negotiations may or may not be conducted before an award. 5. There is no public bid opening. The evaluation committee selects the best qualified proposals. The selection committee conducts negotiations with the top three or four proposers within a competitive range. 6. The completed contract is approved by the Buyer, Purchasing Agent (if over \$25,000), the City Finance Officer, and approved by the City Attorney (if contract amounts to \$500,000 or greater). 7. The City does not use design-build or construction manager at risk for construction.²⁹
Request for Qualifications	<p>Contracts for professional services are not be based on competitive bidding but competence and integrity.</p> <ol style="list-style-type: none"> 1. A Project Scope and Technical Requirements are developed 2. Purchasing advertises the RFQ for a minimum of ten days in a local paper. 3. A Selection Committee is established by the Department Administrator. 4. Based on the Selection Committee’s scoring results, a recommendation is made 5. The recommendation submitted to the Mayor’s office for Approval. 6. The documentation is reviewed by the Mayor’s office. Upon approval the requesting department negotiates with the recommended vendor(s)
Competitive Negotiations	<ol style="list-style-type: none"> 1. Contract may be awarded by negotiation when it has been determined the use of competitive sealed bidding is not practicable for the goods and/or services needed to be obtained by competitive sealed bid. 2. The Request for Proposal process is used for the competitive bidding. 3. After unsuccessful competitive bidding, contracts may be competitively negotiated when the Purchasing Manager determines the bid prices received by the competitive bidding method are unreasonable. 4. Competitively negotiated contracts are not awarded based upon the lowest price alone. Evaluation factors are used to evaluate the quality of the total proposal.
Noncompetitive Negotiations	<p>One or all of the following circumstances exist as determined by the Purchasing Manager:</p> <ol style="list-style-type: none"> a. Only (sole) source of supply available. b. Emergency purchase when “time is of the essence”, impractical to compete.

²⁹ Design-build is expressly excluded in the Chattanooga procurement manual. Chattanooga Procurement Instruction Manual, 2014, Section 2.13.3.d.ii.

	<p>c. Changes to an existing contract that result in a lower price.</p> <p>d. Purchases from State-wide Contracts</p> <p>e. Except where otherwise prohibited by law items such as the following:</p> <ul style="list-style-type: none"> i. Perishable commodities ii. Animals iii. Artifacts and other museum pieces iv. Items purchased for resale <p>v. Copyrighted material such as publications and films.</p>
Best Value Purchasing	<p>Primary Considerations - Price and meeting specifications</p> <p>The Purchasing Division can also consider other relevant factors:</p> <ul style="list-style-type: none"> a. Installation costs; b. Life cycle costs; c. The quality and reliability of the goods and services; d. The delivery terms; e. Indicators of probable vendor performance, such as past performance, the financial resources and ability to perform, the experience or demonstrated capability and responsibility, and the ability to provide reliable maintenance agreements and support; f. The cost of any employee training; g. Vendor standards of responsibility; h. Vendor procedural compliance and professionalism i. The effect of a purchase on agency productivity; and j. Other factors relevant to determining the best value for the City.
Blanket Contracts	<p>A method used for repetitive purchases of goods and services repetitively. The City establishes its expected usage of a product or service for the duration of the contract.</p>

Source: Chattanooga Procurement Instruction Manual, 2014, Section 2

MWBE goals are not set nor are points awarded on the procurement methods listed above.

2. Exemptions for Competitive Bidding

Contracts that are not subject to City competitive bidding rules include:

- Informal purchases
- Small informal purchases
- Sole source purchases
- Single source purchases
- Emergency purchases
- Purchases from State of Tennessee General Services Contracts
- Competitive negotiation
- Small purchases totaling more than \$25, 000 within 12 months.³⁰

Fuel purchases can be made without public advertisement but should have at least three competitive bids. Fuel can also be purchased from the State of Tennessee General Services Department.

³⁰ Chattanooga Procurement Instruction Manual, 2014, Section 2.05.

C. Bonding, Insurance, and Prompt Payment

1. Bonding Requirements

If the cost of a construction project is estimated at \$25,000 or above, Construction Project bid packages must include a 5 percent bid bond and 100 percent performance and payment bonds.³¹ Bid bonds can be in the form of a surety letter, money order, letter of credit, or cash. Payment bonds can be in the form of surety letter, money order, letter of credit, U.S. Treasury bonds, U.S. Treasury bills, State of Tennessee bonds, certificates of deposit (with some qualifications), escrow account, or cash. City staff report that there has not been a practice or policy of waiving bonds.

2. Insurance

Insurance is required for construction contracts, work that exposes the City to liability, and for some service, equipment and materials contracts. The insurance coverage types are:

- Workers' Compensation - see TCA section 50-6-113
- Commercial General Liability - \$2,000,000
- Automobile Liability - \$ 300,000
- Owner's and Contractor's Protective Liability – Negotiable depending on job
- All Risk Property Damage - Negotiable depending on job
- Builder's Risk Liability - Negotiable depending on job³²

City staff reported that bonding has not been as much of a barrier as insurance. In response, the City has hosted workshops on insurance issues.

3. Prompt Payment

City policy on prompt payment for prime vendors is contained in its standards terms and conditions as follows:

The City's delivered payment terms are payment within thirty (30) days except where the law provides otherwise. Payment may be sooner where cash discounts are offered for early payment, however, cash discounts offered will not be considered in determining lowest bidder. In no event will payment be made prior to receipt of an original invoice containing invoice and purchase order numbers and receipt of purchased item(s). The City is not liable for delays in payment caused by failure of the Contractor to send invoice to the address referenced herein.³³

The City does not have requirements for timely prime contractor payments to subcontractors (unless specified in bid documents). City staff report that late payments by prime contractors to subcontractors have been a significant barrier and that subcontractors have come to the City seeking relief on this issue.

³¹ Chattanooga Procurement Instruction Manual, 2014, Sections 2.07.3.e, 3.04, 3.05.

³² Chattanooga Procurement Instruction Manual, 2014, Section 3.06.

³³ City of Chattanooga Purchase Order Standard Terms and Conditions, through July 17, 2018. This language did not change in the revised City terms and conditions after July 17, 2018. The City purchasing manual also provides that prompt payment discounts offered to the City for bid evaluation will be considered if the discount offer is valid for 30 days. City of Chattanooga, Procurement Instruction Manual, Section 2.18 Section 2.18-Bid Discounts Bid Discounts Bid Discounts.

D. Prequalification and Vendor Registration

Chattanooga does not generally prequalify contractors, except for some transportation projects requiring pre-qualification by the Tennessee Department of Transportation. Nor is there a bidders list. For supplier registration, the City uses a web-based Vendor Registry system. Vendors self-register on the Vendor Registry system by product and/or services, federal certification status [disadvantaged business enterprise (DBE), HUBZone, Small Business Administration 8(a), business diversity---minority business enterprise (MBE), Females business enterprise (WBE), veteran owned small business (VOSB), service-disabled veteran business enterprise (SDVBE), economically disadvantaged, other], number of employees (range), number of bids to government agencies, estimated annual revenue. Vendors are generally firms that have received a contract and the registration is maintained by the vendor. Vendors do not have to be registered in order to bid on City contracts. Registered vendors receive notification of different procurement activities. For construction projects, contractors must be licensed and must insure that subcontractors are licensed.

E. Supplier Diversity Program

1. General Background

In October 2004, the City decided to partner with the State of Tennessee in the “Governor’s Office of Diversity Business Enterprise Initiative.”³⁴ The City has had a Supplier Diversity program since 2013. The City website states that its Supplier Diversity Goals are:

- Through ongoing education, outreach, and technical support, increase the number of available and certified minority, Females and disadvantaged owned firms for the City of Chattanooga.
- Increase the number and the dollar amount of purchases with City of Chattanooga DBE firms
- Help the City of Chattanooga DBE firms build more competitive and sustainable businesses for the benefit of the City and citizens of the City of Chattanooga.³⁵

The City Supplier Diversity program covers MBEs, WBEs, LGBTBEs and SDVBEs. Chattanooga has not conducted a disparity study to date. There are no MWBE set asides, MWBE aspirational goals, MWBE preference points, or MWBE contract goal setting in the City Supplier Diversity program at present.

2. Minority Business Task Force.

The Office of Multicultural Affairs (“OMA”) and the Department of Economic and Community Development established a Minority Business Task Force in March 2017 based on Executive Order 2016-1 by the Mayor of Chattanooga. The Task Force met over a year, hosted a minority business forum, and surveyed about 200 local minority business owners. Much of the survey provided a description of survey respondents. Some significant responses with respect to public sector procurement include the following:

- For 8.70 percent of respondents their primary customer/client was government-related entities or nonprofits.
- For 8.89 percent of respondents their primary source of revenues was from bids, RFPs and RFQs.

³⁴ T.C.A. 12-3-801 and Executive Order 14.

³⁵ <https://connect.chattanooga.gov/supplierdiversity/>.

- For 57.31 percent of respondents the primary obstacle to their business was adequate number of customers/clients; for 44.44 percent of respondents the primary obstacle to their business was access to capital
- Only 17.31 percent of respondents had a third-party certification. Such as DBE, MBE, etc.³⁶

The recommendations from the City Minority Business Task Force final report included:

- (1) increase access to capital, including Kiva City designation, a minority angel fund and tax credits to landlords who assist MBEs,
- (2) support a web portal to link entrepreneurs to resources,
- (3) complete a disparity study (although some felt that resources were better channeled elsewhere), and
- (4) grow social capital through coaching and mentoring.³⁷

The Kiva City recommendation for access to capital (described below), and the disparity study, were implemented.

3. Chattanooga Certified DBE Vendor List

For the City Supplier Diversity program MBEs are defined as a business “which is at least 51 percent owned, managed and the daily business operations controlled by one or more minority individuals.”³⁸ The City defines minority individuals such that “Minority *generally* includes the following groups: Native American, Aleuts, Asian-Pacific American, African American, Eskimos, Hispanic, and Native Hawaiian.” [emphasis added]. The City defines WBE as a “business which is at least 51 percent owned, managed and the daily business operations controlled by one or more Females owners.”³⁹ The definition of WBE does not separate out WBEs owned by Caucasian Female from those owned by minority Females.

There is no geographic limitation or revenue size standard on the City definition of firms in the City Supplier Diversity program. There is a citizenship requirement only for LGBTBE certification, but not for MBE, WBE or SDVBEs. The City accepts certification from the following:

- National Minority Supplier Development Council
- Females's Business Enterprise National Council

³⁶ City of Chattanooga, Minority Business Owners Survey Results, <https://connect.chattanooga.gov/minority-business-owners-survey-results/>.

³⁷ Mayor’s Minority Business Task Force Final Report at <https://connect.chattanooga.gov/mayors-minority-business-task-force-final-report/>.

³⁸ City certification form (undated).

³⁹ City certification form (undated). The City defines a LGBTBE as a “business which is at least 51 percent owned, operated, managed and the daily business operations controlled by an LGBT person or persons who are either U.S. citizens or lawful permanent residents.” The City defines a SDVBE as a “business which is at least 51 percent owned and controlled by a service-disabled veteran and the daily business operations controlled by a service-disabled veteran or caregiver.”

- Tennessee Governor's Office of Diversity Business Certification
- Tennessee Department of Transportation
- US Department of Veteran's Affairs Veteran Owned Small Business/Service-Disabled Veteran Owned Small Business
- National Gay and Lesbian Chamber of Commerce Certification
- US Business Leadership Network Disability Supplier Diversity Certification⁴⁰

City DBE certification is free. Applications come into the City Purchasing department and are then reviewed by the OMA.

The City Procurement Manual requires that the City maintain a database of minority owned vendors.⁴¹ The table below provides counts taken in October 2018 from City certified DBE Vendor List. The City DBE Vendor List is posted monthly. As can be seen in the table, there were 24 DBEs in September 2018.

Table 19: City of Chattanooga Certified DBE Vendors by MBE/WBE Status
City of Chattanooga Disparity Study

Category	Number
MBEs	7
WBEs	11
MBE/WBE	4
Unidentified	2
Total	24

Source: City of Chattanooga Certified DBE Vendor List, October 2018

By way of comparison there were 18 MBEs and 33 WBEs on the Tennessee certification list for Chattanooga.⁴² None of the MBEs overlapped with the City vendor list and two WBEs were also on the City certified DBE list. There were no SBEs, LBGTBES or SDVBES on the City DBE list in October 2018.

The City has a much broader mailing list for disadvantaged firms. The table below shows that there were 535 minority owned firms (52.6 percent of the combined counts of minority, Females and veteran owned firms) on the mailing list and 383 Females owned firms (37.7 percent). There were 1,041 firms on the list in December 2018. Firms owned by minority Females appear to be separately identified. Seven of the veteran owned firms were owned by minorities. There were 185 MBEs and 26 WBEs with a Chattanooga address on the mailing list.

⁴⁰ www.chattanooga.gov/purchasing/general-info.

⁴¹ Chattanooga Procurement Instruction Manual, 2014, Section 4.02.2.b.

⁴² Tennessee Diversity Business Certified Directory at <https://tn.diversitysoftware.com/?TN=tn>.

Table 20: City of Chattanooga DBE Mailing List by MBE/WBE Status (2018)
City of Chattanooga Disparity Study

Category	Number	
MBEs	535	52.6%
WBEs	383	37.7%
Veterans	99	9.7%
Total	1017	100%

Source: City of Chattanooga Certified DBE Vendor List, October 2018

4. Fostering Small Business Participation

The City does not have any small business procurement preference program. While the City program says it promotes small business, there is no small business certification at present. There is a definition of small business for City small business incentive grants. In order to qualify for the City small business incentive grant program firms must:

1. Be engaged in a for-profit service or manufacturing industry business enterprise that is not a Prohibited Business;
2. Create a minimum of five (5) new full-time jobs at a Qualified Project Site within a contiguous twelve (12) month period; and
3. Employ fewer than one hundred (100) persons, regardless of the locale, who are compensated for working at least thirty (30) hours per week.⁴³

Small business grants are based upon a multiplier against the annual wage rate average for occupations within the Chattanooga MSA. There is an annual cap of \$10,000 per business.⁴⁴ The formula for the wage incentive is:

$$[\text{Number of employees}] * \$1,000 * [\text{percent of average wage of Chattanooga MSA}]$$

⁴³ Chattanooga Code of Ordinances, Article XVI. – Small Business Incentive Grant Program, Section 11-456 - Definitions. Prohibited Business are “those businesses whose primary source of revenue at the Qualified Project Site is derived from the sale or delivery of services directly to consumers in the adult entertainment, financial services, nightclubs, tattoo parlors, body piercing shops, cash advance branch banking, check cashing, title loan, pawnshops, tobacco paraphernalia, and businesses operating from residential property. Article XVI. – Small Business Incentive Grant Program, Section 11-456 - Definitions.

⁴⁴ Chattanooga Code of Ordinances, Article XVI. – Small Business Incentive Grant Program, Section 11-456.A.

5. Federal DBE Program

The City does not have a separate federally mandated DBE program with separate DBE goals. Instead the City uses Tennessee Department of Transportation (DOT) DBE goals. City staff reports that there has been limited interest in local MBEs pursuing opportunities through the federal DBE process for local road construction.

6. Commercial Nondiscrimination

The City does not have a formal commercial nondiscrimination ordinance. However, under its Title VI language the City states:

The City will insert the notification of the Title VI Regulations in ALL solicitations for bids of work or material, informing all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex or national origin in consideration for an award.⁴⁵

7. Reporting MWBE Utilization and Engagement

The City Procurement Manual calls for the issuance of quarterly diverse business reports, but such a report has not been issued yet.⁴⁶ The City has been working on tracking MWBE spending and the City Purchasing Department has made purchase order award data available to the OMA. The City does not currently track spending on its purchase cards with MWBEs, although the City is in the process of changing purchase card vendors, and City staff indicated that reporting MWBE utilization on purchase cards could be an option.

The following table reports data as presented on the City website on DBE workshop attendance and DBE Vender Engagement percentage. Quarterly data is presented where the cells are not empty. DBE Vender Engagement means outreach and workshop attendance, participation in large events and conferences. Given the empty cells and variance in the workshop attendance data the table is difficult to interpret.

Table 21: City of Chattanooga DBE Vendor Engagement Data
City of Chattanooga Disparity Study

Month	Engage Diverse Business Entities: DBE Vendor Engagement Percentage	Engage Diverse Business Entities: DBE Workshop Attendance
12/31/2013	2.00	
3/31/2014	7.10	
6/30/2014	12.80	
9/30/2014	14.35	886
12/31/2014	12.90	
3/31/2015	12.49	
6/30/2015	15.77	
11/30/2015		4,628
12/31/2015	10.10	
3/31/2016	12.01	226
6/30/2016	12.10	219
9/30/2016	16.13	577

Source: City of Chattanooga, High Performance Government, December 2018

⁴⁵ Chattanooga Procurement Instruction Manual, 2014, Section 4.01.2.

⁴⁶ Chattanooga Procurement Instruction Manual, 2014, Section 4.02.2.a.

8. Business Development Programs

The City in-house business development programs have primarily been workshops on insurance, WordPress websites, social media, safety plans for construction, bonding, Small Business Administration (SBA), and 3rd party certification process. For these workshops and other business development activities the city has partnered with the SBA, Small Business Development Center (SBDC), Governor’s Office of Diversity Business Enterprise, Females’s Business Enterprise Network, Launch, Co-Lab, the Chattanooga Chamber of Commerce (including its incubator), and an independent consultant. In addition to workshops, the City has met with businesses one on one, shared the blanket contract list show winning bid documents, price, and had consultants assist firms with bidding.

As noted above, the Mayor’s Task Force on Minority Business was concerned with access to capital. In FY 2018, the City, Launch Chattanooga, and Co-Lab collaborated to make Chattanooga a “Kiva City.” Kiva is an online micro lending portal that raises funds from the public to make micro loans to small businesses around the world. Kiva requires local partners to raise between \$100,000 and \$200,000 for program implementation and staff to receive Kiva City designation. The City and its partners raised over \$250,000 to make Chattanooga a Kiva City. The City budgeted around \$46,000 in FY 2018 and again in FY2019 for the Kiva City program. City staff reports that a director was hired in 2018 and six (6) to ten (10) loans have been made. In Chattanooga, in November 2018, there was one (1) Co-Lab \$10,000 loan in process on the Kiva site and another \$10,000 loan in process. There were 33 Kiva loans in the United States in November 2018. The Chattanooga Kiva City partners now include the City, Launch Chattanooga, Co-Lab, the Tennessee SBDC, the Chattanooga Urban League and the Chattanooga Chamber of Commerce’s Office of Diversity and Inclusion.

9. Office of Multicultural Affairs

The OMA was established in November 2005 by City Ordinance 11767. The Office is part of the Executive Department of The Mayor. The ordinance states that the OMA is to “administer such other tasks as they relate to multicultural affairs as may be assigned by the Mayor.”⁴⁷ One of the goals of the City OMA is to: “identify disadvantaged business enterprises (DBE), service-disabled veteran owned, Female owned business (WBE), LGBT owned businesses, and small businesses (SBE) according to discrete certification standards, and then to mitigate the effects of past and present social-disadvantage and economic-disadvantage by increasing the opportunity of DBEs in the procurement of goods and services by the City of Chattanooga.”⁴⁸ The OMA web site states that most of the time is spent on outreach and education. In addition, the OMA is:

- Staffing the Mayor’s Minority Business Council
- Working on a web-based portal for local business development services in Chattanooga
- Developing a coaching model for minority business owners
- Producing a Minority Business Survey
- Working on Kiva City designation (discussed above)
- Preparing Internal Certification (discussed above)
- Producing Social Media and Tech Training
- Serving as a resource to DBEs who want to connect to public and private sector opportunities

The OMA and Human Resources has also partnered to bring the GARE (Government Alliance on Race and Equity) program to Chattanooga.

⁴⁷ Chattanooga Code of Ordinances, Article XII Section 2-714. - Powers and duties.

⁴⁸ <https://connect.chattanooga.gov/supplierdiversity/>.

The Office has a staff of two: A Community Outreach Coordinator and a new Multicultural Affairs Coordinator. The budget for OMA from 2017 through 2019 is presented in the table below.

Table 22: City of Chattanooga Office of Multicultural Affairs Operations Budget (FY17-FY19)
City of Chattanooga Disparity Study

	FY 2017 Actual	FY 2018 Projected	FY 2019 Proposed
OMA Operations	\$361,964	\$364,311	\$296,975

Source: City of Chattanooga, The Fiscal Year 2018-2019 Operations Budget, Ordinance 13334, page 8.

For two and a half years, the City Purchasing Division has employed a full-time Supplier Engagement Coordinator who works on DBE certification and assists the OMA with outreach, education events, and workshops on how to do business with the City. The Supplier Engagement Coordinator is also available to consult with vendors.

F. Conclusions

Chattanooga has a program for disadvantaged firms but does not set aspirational goals or contract goals. The City does not currently report MWBE utilization on a regular basis and has not commissioned a previous disparity study. The program does certify firms, but the number of certified firms is very small. The City mailing list to MWBEs is significantly larger. The City focus thus far has been on education and outreach by three staff of the OMA and the Purchasing Division. The City also assembled a Minority Business Task Force and surveyed minority businesses to assess MBE needs and current levels of development. The City has funded a local Kiva City initiative which is staffed and has provided loans to local entrepreneurs.

The impact of these policies is evaluated further in the quantitative and anecdotal material in subsequent chapters in this report. Detailed recommendations about Chattanooga procurement and DBE policy are found in the Recommendations chapter below. Those recommendations are based on the combination of the findings in this chapter with the findings in the Statistical and Anecdotal chapters in this Study.

V. QUANTITATIVE ANALYSIS

A. Introduction

The quantitative analysis measures and compares the availability of firms in each race/ethnicity/gender group within the City's geographical and product market areas to the utilization of each race/ethnicity/gender group, measured by the payments to these groups by the City.

The outcome of the comparison shows us whether there is a disparity between availability and utilization and whether that disparity is an overutilization, an underutilization, or in parity (the amount to be expected). Further, the disparity is tested to see if it is statistically significant. Finally, the regression analysis contained in the Chapter VI Private Sector Analysis will test other explanations for the disparity to determine if it is likely that the disparity is caused by race/ethnicity/gender status, or other factors. If there is statistically significant underutilization of MWBEs that is likely caused by race/ethnicity/gender, then GSPC will determine that there is a legal basis for an inference of discrimination.

Research Question: Statistical Analysis

Is there a statistically significant disparity between the percentage of available MWBE firms, in the Relevant Geographic and Product Markets, and the percentage of dollars spent with MWBE firms in those same markets during the Study Period?

Sections A through E address the methodologies employed for data collection, data assessment, database setup, and data cleanup. Section F focuses on establishment of the relevant market in which the City already does business. Section G estimates the pool of available firms which are deemed to be ready, willing and able to do business with the City. Section H lays out the City's contracting, or utilization history for the five (5) year Study Period, and examines utilization for MWBEs in Construction, A&E, Professional Services, Other Services, and Goods. Section I analyzes the availability of MWBEs as compared to the City's utilization of such firms, to determine if there is a disparity. Section J determines whether the foregoing disparity suggests the presence of discrimination, and Section K provides a conclusion to the chapter.

B. Data Assessment

The data assessment process was initiated by a series of meetings with representatives from the City's purchasing, contract compliance, finance, and IT departments. The purpose of each of these meetings was to determine what data the City of Chattanooga maintains, in what format, and how GSPC could obtain the data. Further, the objective was for GSPC to get a better understanding of the City's purchasing process in order to best execute the methodology that has been approved by the City. It was also important for GSPC's team to get to know procurement personnel and understand how to operate the Study in a manner least intrusive to City personnel.

GSPC's Data Assessment Report is attached hereto as Appendix B.

C. Data Setup

Following approval of the Data Assessment Report, GSPC developed and executed a Data Collection Plan and submitted data requests to the City. The Data Collection Plan set out the process for collecting manual and electronic data for statistical analyses. In addition, it included a plan for collecting data needed for the anecdotal portions of the Study which included surveys, public hearings, focus groups, and interviews. GSPC's Data Collection Plan is attached hereto as Appendix C.

1. Electronic Data

Electronic data (MS Excel or other computer spreadsheets) supplied by the City and other data collected by GSPC were catalogued and stored in GSPC's computer systems subsequent to the data collection effort. The data entered were used to develop databases containing contracting history for each business type for prime contracting done on behalf of the City. Because there was no subcontractor data, GSPC conducted a Prime Vendor Questionnaire sent to all prime vendors. GSPC related all the databases collected in order to cross-reference information among the files, including matching addresses, work categories, and MWBE identification.

2. Manual Data Entry

No manual data entry was needed aside from entering in the mailed-in Prime Vendor Questionnaire forms.

D. Data Assignment, Cleanup and Verification

After the completion of data collection, the data was electronically and manually "cleaned" to find duplicates (both electronically and manually) and fill in unpopulated fields. The cleanup phase also included the following five (5) tasks:

- Assigning and verifying ethnicity, race & gender of each firm;
- Assigning each firm to one or more of the five (5) business categories based upon the kind of work that the firm performs;
- Utilizing zip codes to determine certain areas to assign each firm's location
- Matching files electronically to pick up addresses, ethnicity/race/gender, and/or work category; and
- Filling in any additional missing data on firms.

File cleanup was first done electronically by linking information provided by the City to certain indicators, like commodity codes or cross-referencing information with other files to fill in missing fields. Additionally, rows with conflicting information regarding firm name, ethnicity, and zip code were electronically isolated and manually resolved.

1. Assignment of Race/Gender/Ethnicity

In order to identify all other minority groups, GSPC utilized the assignments given to firms in the governmental lists from the City, the State of Tennessee GoDBE list, and the Tennessee Unified Certification list. Additionally, the City's internal minority flags and external vendor registration data were used if they could be manually verified to be accurately assigned. In assignment of race/gender/ethnicity, priority is

given to race/ethnicity, so that all minority owned firms were categorized according to their race/ethnicity and not by gender. Females are categorized by race and gender. Firms with no race/ethnicity/gender indicated and Caucasian male owned firms are categorized as Non-MWBE firms.

From all the governmental sources, GSPC assembled a Master MWBE list. Where there were any inconsistencies in the race/ethnicity/gender, GSPC researched the firm and manually resolved any inconsistencies.

2. Assignment of Business Categories

While it had been originally reported that the City maintained commodity codes for all vendors, GSPC later determined that there were gaps in the NIGP codes assigned to City vendors. In the vendor registration system, vendors are permitted to identify multiple commodity codes where they perform work. Firms were not required to identify a primary work code, leading to the inability to assign firms to the proper pool of available vendors. In order to properly place firms in the appropriate business categories, GSPC used the correctly labeled NIGP codes to assign the firms into one (1) of the five (5) industries of Construction, A&E, Professional Services, Other Services, and Goods.

Further, where other indicators were missing, GSPC used other available resources, including matching commodity codes from Hoover's/Dun's & Bradstreet, utilizing certain word descriptions in firm names (e.g. ABC Construction or XYZ Lawn Services) and researched firms to determine the type of work they performed. A list of NIGP codes with the assigned business categories is attached as Appendix L. However, generally, (a) the Construction category includes those firms that perform construction services; (b) the A&E category includes only architecture and engineering firms; (c) the Professional Services category includes lawyers, doctors, accountants, banks, and other highly skilled and licensed services; (d) the Other Services category includes services such as janitorial, landscape, and cleaning services; and (e) the Goods category includes firms who provide a tangible product. Because Chattanooga's purchase order data contains NIGP codes at the line item level, instances where there were multiple work categories for a single PO were electronically isolated and manually resolved, assigning a single Work Category to best describe the PO.

3. Contract Classifications

Firms were identified and classified into the following five (5) work categories:

- **Construction** – “The process of building, altering, repairing, improving, or demolishing any public structure or building, or other public improvements of any kind to any public real property. It does not include the routine operation, routine repair or routine maintenance of existing structures, buildings or real property.”
- **Architecture & Engineering (A&E)** –includes design services, architectural and engineering services.
- **Professional Services**– “(i.e., legal services, fiscal agent, financial advisor or advisory services, educational consultant services, and similar services by professional persons or groups of high ethical standards)”
- **Other Services** – “the furnishing of labor, time, or effort by a contractor, not involving the delivery of a specific end product other than reports that are merely incidental to the required

performance. This term does not include employment agreements or collective bargaining agreements.” (not including Construction, Professional Services or other Professional Services)

- **Goods** – “all property, excluding real property or an interest in real property, including but not limited to supplies, equipment, and materials.”

E. Data Source Description

The following describes the databases created by GSPC and used for the analyses contained in this Study:

1. Purchase Order File

The purchase order file is all awards of \$1,000 or more made during the Study Period. It was extracted by the City’s Purchasing department from the Oracle eBiz system and submitted electronically. This file was used to create the mailing list for the Prime Vendor Questionnaire, conduct the Threshold and Utilization Analysis, and all firms in the PO file that were located within the Relevant Market were included in the Availability Estimates. Firms in this unique prime database were counted once in each of the work categories in which they performed work for purposes of availability, but each award over \$1,000 was counted in the Threshold and Utilization analysis.

2. Master Vendor File

The purpose of the Master Vendor File is to collect, in one database, a listing of all firms that are ready, willing, and able to do business with the City. It includes internal lists from the City of Chattanooga as well as outside governmental lists. By including the outside lists GSPC has a broader inclusion of firms that have expressed an interest in doing business with government. Although GSPC may not have picked up every available firm in the Relevant Market, it has included such a broad sample that the percentages are reliable, and no sample bias would be indicated.

The Master Vendor file is a compilation of all lists of vendors used to determine availability estimates. It was also used to match and verify data in other data files, particularly to make sure that information assigned to firms for utilization calculations matched the information assigned to firms for availability calculations. This is important to make sure that GSPC is comparing like-data to like-data. The Master Vendor File contains the lists of firms from the following data sources:

a) Chattanooga Data Files

- Active Suppliers (Current)
- Purchase Orders (Study Period)
- Subcontractors from Prime Vendor Questionnaire (Study Period)
- Certified DBE List (Current)
- Vendor Registry data (Current)

b) Outside Files

- State of Tennessee Go DBE (Current)

- Nashville Airport Certified MWSDBE List (2017)

3. Prime Vendor Questionnaire

The Prime Vendor Questionnaire referenced above was conducted through a mail questionnaire prepared by GSPC and sent to all awardees for all contract awards during the Study Period. There were 1,017 questionnaires sent that were not returned or identified as outside the period, a not-for-profit, governmental agency, or that otherwise should have been excluded as a non-competitive contract (e.g. leases). GSPC received responses from 79 firms which is a 7.8 percent response rate. Of those firms that responded, 34 had subcontractors which indicates that fewer than half of all surveyed contractors utilized subcontractors. Of these 34 prime contractors with subs, identified 29 unique subcontractors with contract values were utilized in the subcontractor analysis.

The responses of the Prime Vendor Questionnaire were used to calculate Subcontractor Utilization and to include subcontractors in Availability Estimates. In addition, the subcontractor race/ethnicity/gender identification was used to verify like information provided by the City of Chattanooga in various databases.

F. Relevant Market Analysis

The now commonly held benchmark that the relevant market area should encompass at least 75 percent to 85 percent of the "qualified" vendors that serve a particular sector has its origins in antitrust lawsuits. In line with antitrust precepts, United States Supreme Court Justice Sandra Day O'Connor in *Croson*, specifically criticized Richmond, Virginia, for making Minority Business Enterprises (MBEs) all over the country eligible to participate in its set-aside programs. The Court reasoned that a mere statistical disparity between the overall minority population in Richmond, Virginia, which was 50 percent African American, and the award of prime contracts to minority owned firms, 0.67 percent of which were African American owned firms, was an insufficient statistical comparison to raise an inference of discrimination. Justice O'Connor also wrote that the relevant statistical comparison is one between the percentage of Minority Business Enterprises in the marketplace [or Relevant Market] who were qualified to perform contracting work (including prime contractors and subcontractors) and the percentage of total City contracting dollars awarded to minority firms. It should be noted that it is preferable, from an economic standpoint, to evaluate the largest and most exhaustive group of firms, even to 100 percent of all firms, but for this Study, GSPC utilized a benchmark of at least 75 percent.

The relevant market has been determined for each of the major procurement categories:

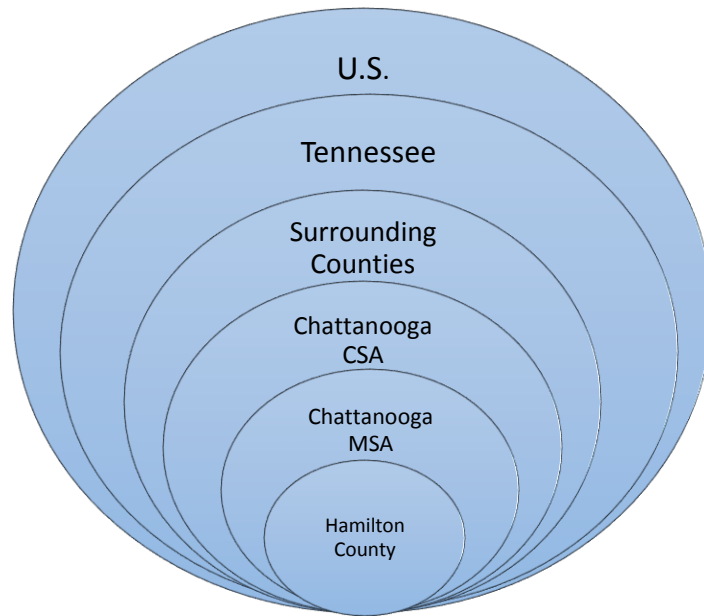
- Construction
- Architecture & Engineering (A&E)
- Professional Services
- Other Services
- Goods

For each procurement category, GSPC measured the "relevant market" by the area where at least 75 percent of the City's dollars were spent during the Study Period.

Preferably, GSPC would have measured the relevant market by the area where at least 75 percent of the bidders were located, because it more accurately defines the geographic area from which the City’s offerors are from and is not limited to those who are successful bidders. However, the City’s bidder data was not available. Therefore, payment data is the alternative data to measure the geographic territory where ready, willing, and able firms are available. There is no question that every firm that has been paid by the City demonstrated themselves ready, willing, and able to do business with the City by performing compensatory services for the City.

The figure below, summarizes the geographic area where at least 75 percent of prime payees are located in each industry. In analyzing the relevant market data, GSPC tabulated the percentage of dollars spent, beginning with Hamilton County (by zip codes). GSPC continued counting in radius surrounding the Hamilton County until the cumulative percentage was equal to or greater than 75 percent.

Table 23: Levels of Measurement for the Geographic Relevant Market
City of Chattanooga Disparity Study



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If, after counting where dollars were spent during the Study Period, the percentage of dollars paid to firms within Hamilton County, TN was not at least 75 percent of all dollars spent, then GSPC calculated the percentages in the Chattanooga MSA (but not including the zip codes in Hamilton County that had already been counted), which includes Catoosa, Dade, Marion, Sequatchie, and Walker County. If the 75 percent benchmark was still not met, then GSPC counted the dollars spent in the counties in the Chattanooga CSA, which includes the counties of Bradley, Jackson, McMinn, Murray, Polk, Rhea, and Whitfield. If the 75 percent benchmark was not met, then GSPC counted dollar spent in the surrounding counties of Bledsoe and Meigs.

If dollars received by firms doing business with the City that are located within the CSA did not reach the 75 percent benchmark, then GSPC began counting dollars going to firms located in the State of Tennessee.

If dollars received by firms still did not reach the 75 percent benchmark, GSPC went to all states adjacent to Tennessee. Excluding Goods, the 75 percent benchmark was reached for all procurement categories in the State of Tennessee and the State of Kentucky.

The tables below detail the dollars spent in each level of the Geographic Relevant Market calculations by purchase orders, otherwise identified by the City as contract awards. Only regions that have awards appear in the tables. It is interesting to note that in Construction 27.06 percent of all the dollars spent were in Kentucky. This is greatly influenced by several large dollar contracts awarded to Kentucky contractors. Overall this was 8.01 percent of the spending during the Study Period. This drastically affected the relevant market for the Construction category because of the size of the out of state award. Also, the three largest contracts awarded by the City were excluded from analysis as they were identified as grants that were used in the construction of a local Volkswagen plant. These procurements totaled \$378,511,468.80, which would have greatly impacted total spending. In A&E, 82.01 percent of the dollars were spent with firms within Hamilton County and 84.21 percent in Professional Services. The Professional Services market area was greatly influenced by very large insurance awards (19.85 percent of all spending in the Study Period) which kept the market area within Hamilton County. In Other Services, 76.85 percent was spent in Tennessee and Georgia, as well as 64.14 percent in Goods.

Table 24: Relevant Market Area - Construction
(Using Prime Award Dollars, FY 2014 – 2018)
City of Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$27,592,886.06	11.36%	11.36%
MSA	\$20,777,306.76	8.55%	19.91%
CSA	\$107,245,932.29	44.15%	64.07%
TN	\$8,883,993.79	3.66%	67.72%
KY	\$65,738,601.63	27.06%	94.79%
GA	\$10,089,080.71	4.15%	98.94%
AL	\$392,910.85	0.16%	99.10%
NC	\$294,483.00	0.12%	99.22%
MO	\$1,200.00	0.00%	99.22%
USA	\$1,884,706.42	0.78%	100.00%
Total	\$242,901,101.51	100.00%	

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Table 25: Relevant Market Area - Professional Services
 (Using Prime Award Dollars, FY 2014 – 2018)
 City of Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$307,516,742.54	84.21%	84.21%
MSA	\$669,433.83	0.18%	84.39%
CSA	\$1,853,686.11	0.51%	84.90%
TN	\$10,766,921.11	2.95%	87.84%
AL	\$4,845,721.86	1.33%	89.17%
GA	\$2,232,014.25	0.61%	89.78%
KY	\$1,402,957.93	0.38%	90.17%
VA	\$770,401.78	0.21%	90.38%
MO	\$301,009.48	0.08%	90.46%
NC	\$221,911.18	0.06%	90.52%
MS	\$34,000.00	0.01%	90.53%
USA	\$34,584,602.26	9.47%	100.00%
Total	\$365,199,402.33	100.00%	

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Table 26: Relevant Market Area - Other Services
 (Using Prime Award Dollars, FY 2014 – 2018)
 City of Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$88,114,596.42	34.58%	34.58%
MSA	\$3,246,363.22	1.27%	35.85%
CSA	\$19,236,333.98	7.55%	43.40%
TN	\$48,151,002.94	18.90%	62.30%
GA	\$37,081,878.37	14.55%	76.85%
KY	\$21,509,362.28	8.44%	85.29%
AR	\$6,827,798.28	2.68%	87.97%
AL	\$2,312,504.54	0.91%	88.88%
VA	\$1,856,452.23	0.73%	89.61%
NC	\$1,260,082.37	0.49%	90.10%
MO	\$35,508.82	0.01%	90.11%
MS	\$20,800.00	0.01%	90.12%
USA	\$25,170,578.46	9.88%	100.00%
Total	\$254,823,261.90	100.00%	

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Table 27: Relevant Market Area - Architecture & Engineering
 (Using Prime Award Dollars, FY 2014 – 2018)
 City of Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$20,873,387.09	82.01%	82.01%
MSA	\$4,700.00	0.02%	82.03%
TN	\$3,361,180.27	13.21%	95.24%
NC	\$696,242.76	2.74%	97.98%
VA	\$130,361.33	0.51%	98.49%
GA	\$36,348.79	0.14%	98.63%
AL	\$14,182.42	0.06%	98.69%
USA	\$334,366.93	1.31%	100.00%
Total	\$25,450,769.59	100.00%	

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Table 28: Relevant Market Area - Goods
 (Using Prime Award Dollars, FY 2014 – 2018)
 City of Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$71,986,308.65	30.27%	30.27%
MSA	\$3,077,636.93	1.29%	31.57%
CSA	\$13,699,126.83	5.76%	37.33%
Surrounding Counties	\$17,000.00	0.01%	37.33%
TN	\$54,162,592.21	22.78%	60.11%
GA	\$9,595,429.27	4.03%	64.14%
AL	\$5,950,765.72	2.50%	66.65%
MS	\$1,797,141.16	0.76%	67.40%
MO	\$1,560,040.63	0.66%	68.06%
KY	\$1,521,324.10	0.64%	68.70%
NC	\$1,422,110.23	0.60%	69.30%
VA	\$513,784.65	0.22%	69.51%
AR	\$37,486.00	0.02%	69.53%
USA	\$72,465,610.69	30.47%	100.00%
Total	\$237,806,357.08	100.00%	

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G. Availability Analysis

1. Methodology

The methodology utilized to determine the availability of businesses for public contracting is crucial to understanding whether a disparity exists within the relevant market. Availability is a benchmark to examine whether there are any disparities between the utilization of MWBEs and their availability in the marketplace.

Availability is the determination of the percentage of MWBEs that are “ready, willing, and able” to provide goods or services to the City of Chattanooga.

Croson and subsequent decisions give only general guidance as to how to measure availability. One common theme from the court decisions is that being qualified to perform work for a local jurisdiction is one of the key indices of an available firm. In addition, the firm must have demonstrated that it is both willing and able to perform the work.

The measures of availability utilized in this Study incorporate all the criteria of availability required by Croson:

- The firm does business within an industry group from which the City of Chattanooga makes certain purchases.
- The firm's owner has taken steps to do business with the City and qualified itself to do such business by registering or certifying itself.
- The firm is located within a relevant geographical area such that it can do business with the City of Chattanooga.

The following definitions are necessary for the estimation of availability:

Definitions:

Let:

Firm (Business Name, Ethnicity, Work Category, County, State)

A = Availability Estimates

A (Asian) = Availability Estimates for Asian American Business Enterprises

N (Asian) = Number of Asian American Business Enterprises in the relevant market

N (MWBE) = Number of Minority owned Business Enterprises

N (t) = Total number of businesses in the pool of bidders in the procurement category (for example, Construction)

Availability, (A), is a percentage and is computed by dividing the number of firms in each MWBE group by the total number of businesses in the pool of bidders for that procurement category, N (t). For instance, availability for Asian American Business Enterprises is given by

$$A (\text{Asian}) = N (\text{Asian})/N (t)$$

and total availability for all MWBE groups is given by

$$A (\text{MWBE}) = N (\text{MWBE})/N (t).$$

Once these availability estimates were calculated, GSPC compared them to the percentage of firms utilized in the respective business categories in order to generate the disparity indices which will be discussed later in this analysis.

4. Measurement Basis for Availability

There are numerous approaches to measuring available, qualified firms. GSPC has established a methodology of measuring availability based upon demonstrated interest in doing business with governments. In determining whether a firm is ready, willing, and able, it cannot be presumed that simply because a firm is doing business in a relevant market, it desires, or is capable of, working for the City, particularly as a prime contractor, which may require a particular capacity. However, a determination of availability for subcontractors, where all levels of work are available, (to be made strictly based upon the existing vendor base of the City assumes that there are no discriminatory barriers associated with registration or certification. GSPC measured Prime Contractor Availability by utilizing the Master Vendor File (the contents of which is set forth below) but including only those firms that have bid, been prequalified, or performed as prime contractors (sources for prime contractors indicated by an (*). In determining those firms to be included in the subcontractor availability pool, GSPC included the entire “Master Vendor File.”

- a) City’s Active Supplier List (Current)
- b) City’s Purchase Orders (Study Period)
- c) City’s Certified DBE List (Current)
- d) City Vendor Registry (Current)
- e) Tennessee GoDBE List (Current)
- f) Nashville Airport Certified MWSBE/DBE List (2017)

5. Capacity

The ability or capacity to perform the work is tested below in the Threshold Analysis. It is also tested in the Regression Analysis conducted in Chapter VI below.

First, capacity is important to determine whether a separate availability estimate for prime contractors and subcontractors is needed. GSPC performs a threshold analysis of the level of contracting done by prime contractors to determine if it is reasonable to believe that the firms in the marketplace that have at least registered to do business with governments and that are included in our availability lists, have the capacity to perform as prime contractors, or only as subcontractors. The threshold analysis shows the tier of awards at each level and across all race/ethnicity/gender groups.

Secondly, from the Survey of Business Owners, GSPC determined whether the level of contracting awarded to MWBEs outside of contracting with the City of Chattanooga indicates similar levels of contracting to those attained in City awards. If not, that could indicate a level of unutilized capacity of MWBEs within the City’s contracting.

Finally, the regression analysis shows whether race/ethnicity/gender factors are impediments overall to the success of MWBEs in obtaining awards in the Chattanooga marketplace and whether, but for those factors, firms would have the capacity to provide goods and services on a level higher than what is presently being utilized.

a) Overall Award Thresholds to Determine Level of Contracting

In Construction, there were a total of 227 awards over \$1,000 for a total of \$242,901,101.51 over the Study Period. The average award was \$ 1,070,048.91 with half of all awards at \$6,700 or less. Only 9 or 3.96 percent of all Construction awards were \$5M or more, but they account for 80.59 percent of all Construction award dollars.

Table 29: Award Thresholds - Construction
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	96	42.29%	\$194,939.00	0.08%
5,000.01 to 10,000	33	14.54%	\$234,957.97	0.10%
10,000.01 to 50,000	33	14.54%	\$646,417.20	0.27%
50,000.01 to 100,000	7	3.08%	\$497,225.72	0.20%
100,000.01 to 250,000	11	4.85%	\$1,691,376.61	0.70%
250,000.01 to 500,000	15	6.61%	\$5,035,376.71	2.07%
500,000.01 to 750,000	8	3.52%	\$5,012,553.83	2.06%
750,000.01 to 1,000,000	2	0.88%	\$1,742,415.39	0.72%
1,000,000.01 to 1,500,000	4	1.76%	\$4,470,619.42	1.84%
1,500,000.01 to 2,000,000	2	0.88%	\$3,571,082.17	1.47%
2,000,000.01 to 2,500,000	1	0.44%	\$2,384,000.45	0.98%
2,500,000.01 to 5,000,000	6	2.64%	\$21,671,664.50	8.92%
Over 5,000,000	9	3.96%	\$195,748,472.55	80.59%
Total	227	100.00%	\$242,901,101.51	100.00%

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Average	Median
\$1,070,048.91	\$6,700.00

In Professional Services, there was a total of 1008 awards over \$1,000 for a total of \$365,199,402.33 over the Study Period. The average award was \$362,300.99 with half of all awards at \$5,326.68 or less. Only seven (7) or 0.69 percent of all Professional Service awards were \$5M or more, but they account for 78.40 percent of all Professional Service award dollars.

Table 30: Award Thresholds - Professional Services
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	491	48.71%	\$1,133,818.12	0.31%
5,000.01 to 10,000	166	16.47%	\$1,180,867.54	0.32%
10,000.01 to 50,000	210	20.83%	\$5,150,904.11	1.41%
50,000.01 to 100,000	42	4.17%	\$3,042,754.70	0.83%
100,000.01 to 250,000	37	3.67%	\$5,938,232.17	1.63%
250,000.01 to 500,000	17	1.69%	\$6,049,856.00	1.66%
500,000.01 to 750,000	12	1.19%	\$7,433,781.10	2.04%
750,000.01 to 1,000,000	5	0.50%	\$4,247,868.66	1.16%
1,000,000.01 to 1,500,000	7	0.69%	\$8,511,454.26	2.33%
1,500,000.01 to 2,000,000	3	0.30%	\$4,848,460.98	1.33%
2,000,000.01 to 2,500,000	3	0.30%	\$6,440,071.37	1.76%
2,500,000.01 to 5,000,000	8	0.79%	\$24,921,219.93	6.82%
Over 5,000,000	7	0.69%	\$286,300,113.39	78.40%
Total	1008	100.00%	\$365,199,402.33	100.00%

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Average	Median
\$362,300.99	\$5,326.68

In Other Services, there was a total of 3434 awards over \$1,000 for a total of \$254,823,261.90 over the Study Period. The average award was \$74,205.96 with half of all awards at \$3,318.07 or less. Only 50 or 1.46 percent of all Other Service awards were \$1M or more, but they account for 69.91 percent of all Other Service award dollars.

Table 31: Award Thresholds - Other Services
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	2106	61.33%	\$4,764,416.90	1.87%
5,000.01 to 10,000	500	14.56%	\$3,633,793.69	1.43%
10,000.01 to 50,000	523	15.23%	\$10,803,643.26	4.24%
50,000.01 to 100,000	88	2.56%	\$6,299,582.82	2.47%
100,000.01 to 250,000	91	2.65%	\$14,815,626.55	5.81%
250,000.01 to 500,000	48	1.40%	\$16,326,735.12	6.41%
500,000.01 to 750,000	18	0.52%	\$11,178,566.21	4.39%
750,000.01 to 1,000,000	10	0.29%	\$8,850,869.26	3.47%
1,000,000.01 to 1,500,000	13	0.38%	\$15,343,351.61	6.02%
1,500,000.01 to 2,000,000	11	0.32%	\$19,398,600.34	7.61%
2,000,000.01 to 2,500,000	3	0.09%	\$7,059,441.06	2.77%
2,500,000.01 to 5,000,000	13	0.38%	\$47,470,358.80	18.63%
Over 5,000,000	10	0.29%	\$88,878,276.28	34.88%
Total	3434	100.00%	\$254,823,261.90	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$74,205.96	\$3,318.07

In A&E, there was a total of 151 awards over \$1,000 for a total of \$25,450,769.59 over the Study Period. The average award was \$168,548.14 with half of all awards at \$9,158.94 or less. Only eight (8) or 5.30 percent of all A&E awards were \$1M or more, but they account for 63.67 percent of all A&E award dollars.

Table 32: Award Thresholds - Architecture and Engineering
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	64	42.38%	\$161,601.63	0.63%
5,000.01 to 10,000	23	15.23%	\$192,470.48	0.76%
10,000.01 to 50,000	29	19.21%	\$628,725.06	2.47%
50,000.01 to 100,000	7	4.64%	\$514,717.32	2.02%
100,000.01 to 250,000	8	5.30%	\$1,390,979.83	5.47%
250,000.01 to 500,000	7	4.64%	\$2,582,931.76	10.15%
500,000.01 to 750,000	3	1.99%	\$1,991,882.86	7.83%
750,000.01 to 1,000,000	2	1.32%	\$1,781,990.32	7.00%
1,000,000.01 to 1,500,000	5	3.31%	\$6,194,888.96	24.34%
1,500,000.01 to 2,000,000	0	0.00%	\$0.00	0.00%
2,000,000.01 to 2,500,000	1	0.66%	\$2,294,160.55	9.01%
2,500,000.01 to 5,000,000	1	0.66%	\$2,580,884.08	10.14%
Over 5,000,000	1	0.66%	\$5,135,536.74	20.18%
Total	151	100.00%	\$25,450,769.59	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$168,548.14	\$9,158.94

In Goods, there was a total of 5493 awards over \$1,000 for a total of \$237,806,357.08 over the Study Period. The average award was \$43,292.62 with half of all awards at \$3,450.00 or less. Only 41 or 0.75 percent of all Goods awards were \$1M or more, but they account for 57.05 percent of all Goods award dollars.

Table 33: Award Thresholds - Goods
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	3256	59.28%	\$7,344,994.68	3.09%
5,000.01 to 10,000	719	13.09%	\$5,185,190.90	2.18%
10,000.01 to 50,000	1134	20.64%	\$21,942,042.91	9.23%
50,000.01 to 100,000	131	2.38%	\$9,604,781.71	4.04%
100,000.01 to 250,000	132	2.40%	\$20,604,743.43	8.66%
250,000.01 to 500,000	50	0.91%	\$17,194,928.29	7.23%
500,000.01 to 750,000	21	0.38%	\$12,513,894.41	5.26%
750,000.01 to 1,000,000	9	0.16%	\$7,736,673.99	3.25%
1,000,000.01 to 1,500,000	19	0.35%	\$22,364,254.64	9.40%
1,500,000.01 to 2,000,000	4	0.07%	\$6,888,250.59	2.90%
2,000,000.01 to 2,500,000	4	0.07%	\$9,618,444.26	4.04%
2,500,000.01 to 5,000,000	8	0.15%	\$28,873,184.05	12.14%
Over 5,000,000	6	0.11%	\$67,934,973.19	28.57%
Total	5493	100.00%	\$237,806,357.08	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$43,292.62	\$3,450.00

In all Work Categories, there was a total of 10313 awards over \$1,000 for a total of \$1,126,180,892.41 over the Study Period. The average award was \$109,200.13 with half of all awards at \$3,600.00 or less. Only 149 or 1.44 percent of all awards were \$1M or more, but they account for 78.93 percent of all award dollars.

Table 34: Award Thresholds - All Work Categories
City of Chattanooga Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	6013	58.31%	\$13,599,770.33	1.21%
5,000.01 to 10,000	1441	13.97%	\$10,427,280.58	0.93%
10,000.01 to 50,000	1929	18.70%	\$39,171,732.53	3.48%
50,000.01 to 100,000	275	2.67%	\$19,959,062.27	1.77%
100,000.01 to 250,000	279	2.71%	\$44,440,958.60	3.95%
250,000.01 to 500,000	137	1.33%	\$47,189,827.88	4.19%
500,000.01 to 750,000	62	0.60%	\$38,130,678.42	3.39%
750,000.01 to 1,000,000	28	0.27%	\$24,359,817.62	2.16%
1,000,000.01 to 1,500,000	48	0.47%	\$56,884,568.89	5.05%
1,500,000.01 to 2,000,000	20	0.19%	\$34,706,394.08	3.08%
2,000,000.01 to 2,500,000	12	0.12%	\$27,796,117.70	2.47%
2,500,000.01 to 5,000,000	36	0.35%	\$125,517,311.36	11.15%
Over 5,000,000	33	0.32%	\$643,997,372.15	57.18%
Total	10313	100.00%	\$1,126,180,892.41	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$109,200.13	\$3,600.00

Since 96.49 percent of the City’s prime awards were under \$100,000, and 99.09 percent were under \$500,000, GSPC determined that all firms, including those that have provided services only as subcontractors, have the capacity to perform as prime contractors on the majority of City awards. There is no need to separate the availability estimates between prime contractors and subcontractors, as all can perform as both prime contractors and subcontractors. Notwithstanding this determination, GSPC does not suggest that all firms have the capacity to perform on all contracts. However, even in its disparity analysis of contracts under \$1,000,000, GSPC found statistically significant underutilization of MWBE firms. Other issues of capacity are controlled for in the regression analysis in Chapter V. There it was found that even when GSPC controlled for numerous factors, such as, size of firm, education of owner, number of employees, etc., there was still a statistically significant disparity in the utilization of MWBE firms.

b) City award Thresholds by Race/Ethnicity/Gender

As a part of the GSPC Survey of Business Owners, surveyed firms reported the highest contract award received by their firm in either the public or private sectors. The survey responses were measured against the highest contract award identified in the City awards data for each race/ethnicity/gender group and compared that to the percentage of each MWBE group that responded with a single project award higher than the highest contract awarded by the City. The revenues include both public and private contracting by the respondents. Native American owned firms have 87.5 percent more revenue than the contract awarded;

Asian American owned firms have 60.0 percent unutilized capacity; Females owned firms have 32.3 percent more revenue than the contract awarded; and African American owned businesses have 26.8 percent more revenue than the contract awarded. This means that that percentage of firms could have performed in contracts higher than those awarded to that race/ethnicity/gender group.

Table 35: Highest Award by MWBE Status Compared to Survey Responses
(from \$1,000 and over award data and Question 11 Responses from Survey of Business Owners)
 City of Chattanooga Disparity Study

Race/Ethnicity	Highest Award	% Surveyed with single contract in Excess of the Highest Award (Unutilized capacity)
African American	\$1,073,232.90	13.79%
Asian American	\$2,347,000.60	33.33%
Hispanic American	\$1,132,455.00	14.29%
Native American	\$932,277.62	75.00%
Caucasian Female	\$2,737,353.50	5.13%
Non-MWBE	\$127,108,221.15	0.00%

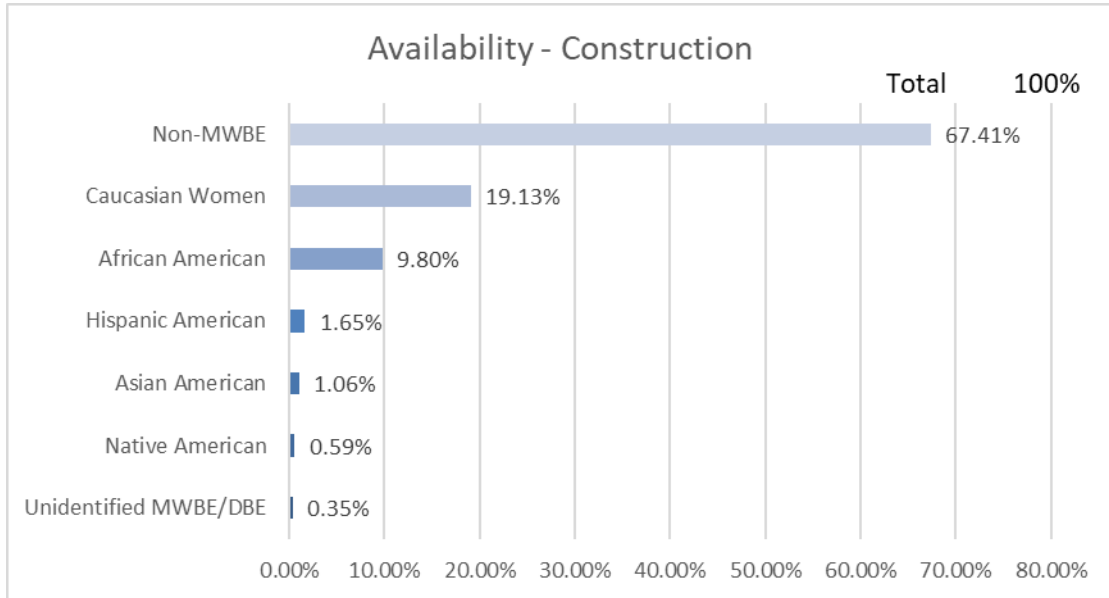
In addition to this measure of unutilized capacity, the Private Sector Analysis, controlling for several other variables strengthens support for MWBE firms’ capacity (see Chapter VI of this Study). GSPC determined that MWBE capacity should be sufficient to perform on City of Chattanooga prime contracts, further encouraging the use of uniform availability estimates for prime contracting and subcontracting.

6. Availability Estimates

Below are the Availability Estimates for the Study. The data are separated into the five (5) major business categories: Construction, A&E, Professional Services, Other Services, and Goods. The figures below show the number of firms by race/gender/ethnicity as compared with the total number of firms. All availability (not broken down by work category) is contained in Appendix H.

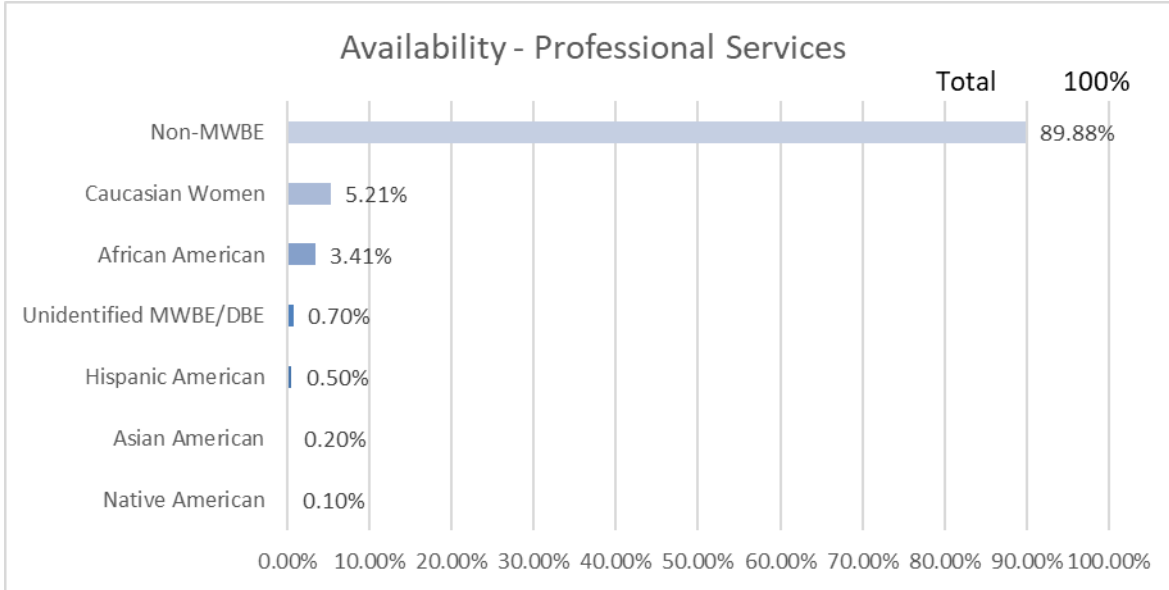
The availability analyzed from the Master Vendor File includes all unique vendors in each work category. The availability in Table 36 below shows that, in Construction within the Relevant Market, African American owned firms make up 9.80 percent of all construction firms; Caucasian Female owned firms make up 19.13 percent; Asian American owned firms are 1.06 percent; Hispanic American owned firms and Native American owned firms have availability of 1.65 percent and 0.59 percent, respectively. In total, MWBEs account for 32.59 percent of all available firms in Construction.

Table 36: Availability Estimates - Construction
In the Relevant Market – State of TN and State of KY
City of Chattanooga Disparity Study



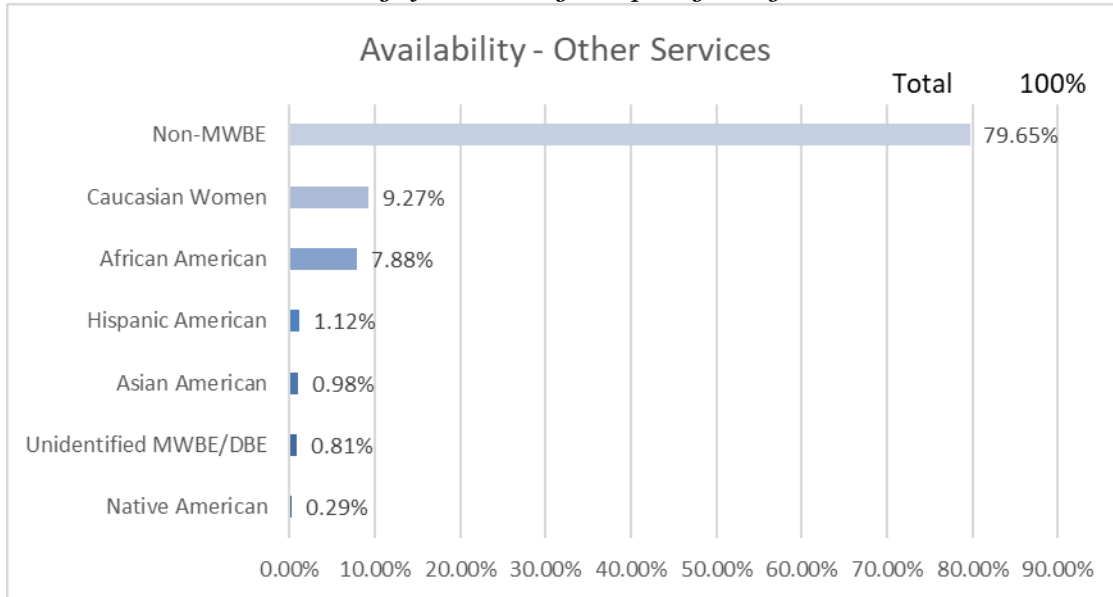
In Professional Services, availability in Table 37 indicates that Non-MWBE owned firms make up 89.88 percent of all available firms, and MWBEs make up 10.12 percent. African American owned firms represent 3.41 percent and Caucasian Female owned firms make up 5.21 percent of all available Professional Services firms. Asian American owned and Hispanic American owned Professional Services firms account for 0.20 percent and 0.50 percent respectively. Native American owned firms have 0.10 percent availability in this category.

Table 37: Availability Estimates - Professional Services
In the Relevant Market – Hamilton County, TN
City of Chattanooga Disparity Study



As set out in the Other Services availability (Table 38), African American owned firms make up 7.88 percent and Caucasian Female owned firms make up 9.27 percent. Non-MWBE owned firms account for 79.65 percent, while Asian American owned firms are 0.98 percent. Hispanic American owned firms are 1.12 percent and Native American owned firms have 0.29 percent availability in this category. MWBEs make up 20.35 percent of all available firms in Other Services.

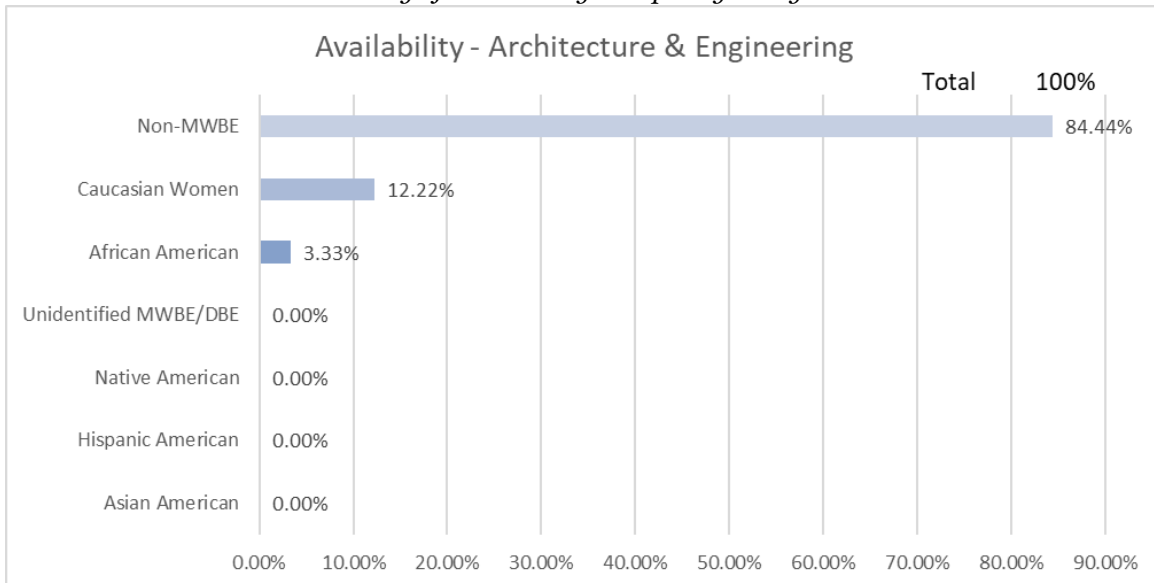
Table 38: Availability Estimates - Other Services
 In the Relevant Market – State of TN and State of GA
 City of Chattanooga Disparity Study



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In Table 39, Architecture & Engineering (A&E), there is a 0 percent availability for Native American, Hispanic American, and Asian American owned firms. MWBE owned firms make up 15.38 percent of all available firms with Caucasian Female owned firms and African American owned firms making up 12.09 percent and 3.30 percent respectively. Non-MWBE firms make up 84.62 percent of available firms.

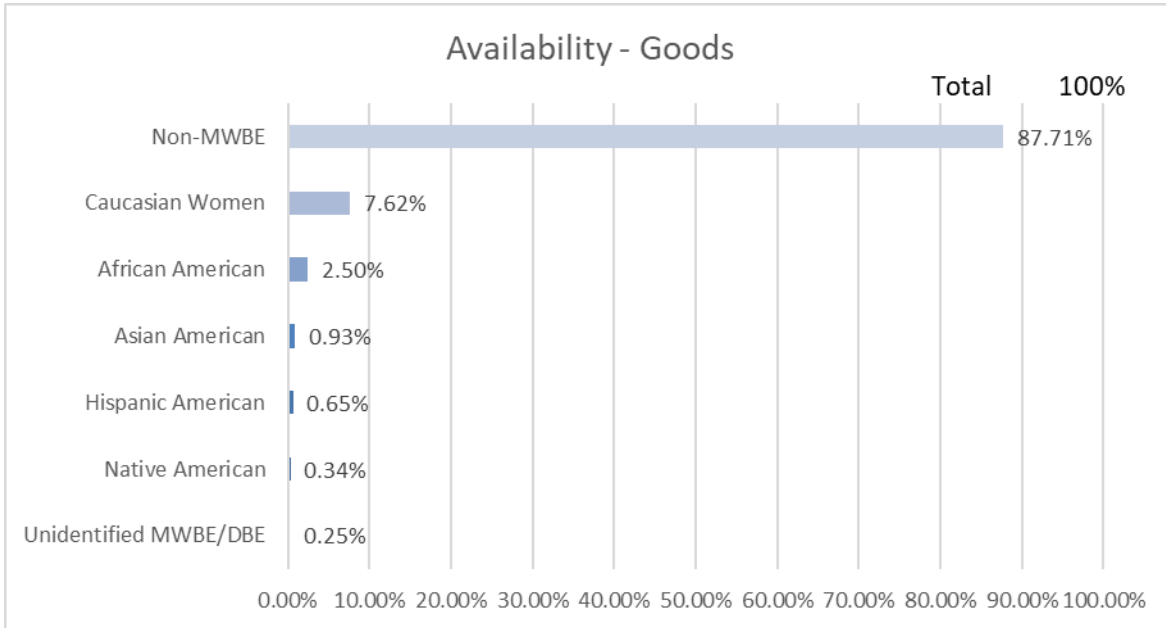
Table 39: Availability Estimates - Architecture & Engineering
 In the Relevant Market – Hamilton County, TN
 City of Chattanooga Disparity Study



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Goods availabilities are reflected in Table 40: businesses owned by African Americans make up 2.50 percent and Caucasian Female owned firms make up 7.62 percent of the firms. Non-MWBEs account for 87.71 percent of all availability, while Asian American owned firms have 0.93 percent. Hispanic American owned firms have 0.65 percent and Native American owned firms have 0.34 percent availability in this category. MWBEs total 12.29 percent of all available firms in Goods.

Table 40: Availability Estimates - Goods
In the Relevant Market – USA
 City of Chattanooga Disparity Study



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H. Utilization Analysis

1. Prime Utilization

The relevant award history for the City has been recorded based upon the purchase order database provided by the City. In the Prime Utilization tables below, the dollars and percentage of dollars awarded in each of the five (5) major procurement categories have been broken out by race/ethnicity/gender for each year of the Study Period. Additionally, the tables include the number of awards and percent of awards. The total of each race/ethnicity/gender group represented in the MWBE category will, when added to the Non-MWBE Category, equal the Total Column.

***PRIME UTILIZATION** is the percentage of actual payments made directly by the City during the Study Period to MWBEs in comparison to all actual payments made directly to all vendors by the City during the Study Period.*

Overall, in all work categories, there are low numbers of both dollars and awards for MWBEs. The awards that were given tended to be small dollar awards. The main outliers were for Caucasian Female owned businesses, which in FY 15 in Professional Services and FY 17 in A&E received large awards.

Table 41: Prime Utilization - Construction
In the Relevant Market – State of TN and State of KY
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$8,000.00	0.07%	1	2.63%
	FY15	\$27,550.61	0.01%	3	5.66%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$59,350.61	0.03%	7	3.43%
Asian American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MBE	FY14	\$8,000.00	0.07%	1	2.63%
	FY15	\$27,550.61	0.01%	3	5.66%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$59,350.61	0.03%	7	3.43%
Caucasian Women	FY14	\$39,163.14	0.32%	5	13.16%
	FY15	\$332,312.61	0.18%	5	9.43%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$14,172.92	0.27%	3	8.11%
	FY18	\$77,902.00	0.67%	2	5.00%
	Study Period	\$463,550.67	0.20%	15	7.35%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MWBE/DBE	FY14	\$47,163.14	0.38%	6	15.79%
	FY15	\$359,863.22	0.19%	8	15.09%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$14,172.92	0.27%	3	8.11%
	FY18	\$77,902.00	0.67%	2	5.00%
	Study Period	\$522,901.28	0.23%	22	10.78%
Non-MWBE	FY14	\$12,234,249.21	99.62%	32	84.21%
	FY15	\$184,397,998.57	99.81%	45	84.91%
	FY16	\$16,283,562.61	99.85%	33	91.67%
	FY17	\$5,291,883.17	99.73%	34	91.89%
	FY18	\$11,508,125.70	99.33%	38	95.00%
	Study Period	\$229,715,819.25	99.77%	182	89.22%
Total	FY14	\$12,281,412.35	100.00%	38	100.00%
	FY15	\$184,757,861.79	100.00%	53	100.00%
	FY16	\$16,307,362.61	100.00%	36	100.00%
	FY17	\$5,306,056.08	100.00%	37	100.00%
	FY18	\$11,586,027.70	100.00%	40	100.00%
	Study Period	\$230,238,720.53	100.00%	204	100.00%

Table 42: Prime Utilization - Professional Services
In the Relevant Market – Hamilton County, TN
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$54,000.00	0.03%	1	0.98%
	FY15	\$64,075.00	1.52%	3	2.86%
	FY16	\$61,950.00	0.38%	2	1.94%
	FY17	\$221,616.39	1.24%	5	4.63%
	FY18	\$163,795.68	0.19%	5	5.75%
	Study Period	\$565,437.07	0.18%	16	3.17%
Asian American	FY14	\$1,275.00	0.00%	1	0.98%
	FY15	\$3,000.00	0.07%	2	1.90%
	FY16	\$3,975.00	0.02%	2	1.94%
	FY17	\$7,575.00	0.04%	1	0.93%
	FY18	\$6,000.00	0.01%	1	1.15%
	Study Period	\$21,825.00	0.01%	7	1.39%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$82,314.00	0.10%	1	1.15%
	Study Period	\$82,314.00	0.03%	1	0.20%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$3,800.00	0.02%	1	0.97%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$3,800.00	0.00%	1	0.20%
Total MBE	FY14	\$55,275.00	0.03%	2	1.96%
	FY15	\$67,075.00	1.59%	5	4.76%
	FY16	\$69,725.00	0.43%	5	4.85%
	FY17	\$229,191.39	1.29%	6	5.56%
	FY18	\$252,109.68	0.30%	7	8.05%
	Study Period	\$673,376.07	0.22%	25	4.95%
Caucasian Women	FY14	\$48,903.06	0.03%	8	7.84%
	FY15	\$1,253,633.51	29.79%	8	7.62%
	FY16	\$105,647.38	0.64%	8	7.77%
	FY17	\$153,800.00	0.86%	15	13.89%
	FY18	\$158,027.10	0.19%	13	14.94%
	Study Period	\$1,720,011.05	0.56%	52	10.30%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$2,975.00	0.07%	1	0.95%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$2,975.00	0.00%	1	0.20%
Total MWBE/DBE	FY14	\$104,178.06	0.06%	10	9.80%
	FY15	\$1,323,683.51	31.46%	14	13.33%
	FY16	\$175,372.38	1.07%	13	12.62%
	FY17	\$382,991.39	2.15%	21	19.44%
	FY18	\$410,136.78	0.49%	20	22.99%
	Study Period	\$2,396,362.12	0.78%	78	15.45%
Non-MWBE	FY14	\$184,829,550.78	99.94%	92	90.20%
	FY15	\$2,884,326.38	68.54%	91	86.67%
	FY16	\$16,210,343.61	98.93%	90	87.38%
	FY17	\$17,438,872.59	97.85%	87	80.56%
	FY18	\$83,757,287.06	99.51%	67	77.01%
	Study Period	\$305,120,380.43	99.22%	427	84.55%
Total	FY14	\$184,933,728.84	100.00%	102	100.00%
	FY15	\$4,208,009.88	100.00%	105	100.00%
	FY16	\$16,385,715.99	100.00%	103	100.00%
	FY17	\$17,821,863.98	100.00%	108	100.00%
	FY18	\$84,167,423.84	100.00%	87	100.00%
	Study Period	\$307,516,742.54	100.00%	505	100.00%

Table 43: Prime Utilization - Other Services
 In the Relevant Market – State of TN and State of GA
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$1,577,730.03	5.48%	71	14.29%
	FY15	\$945,976.28	3.62%	85	17.14%
	FY16	\$2,065,467.13	5.43%	53	8.72%
	FY17	\$1,137,754.05	1.79%	47	9.98%
	FY18	\$989,363.10	2.50%	42	7.69%
	Study Period	\$6,716,290.59	3.43%	298	11.38%
Asian American	FY14	\$238,731.19	0.83%	3	0.60%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$30,754.20	0.05%	9	1.91%
	FY18	\$194,135.00	0.49%	19	3.48%
	Study Period	\$463,620.39	0.24%	31	1.18%
Hispanic American	FY14	\$2,625.16	0.01%	2	0.40%
	FY15	\$96,842.90	0.37%	1	0.20%
	FY16	\$111,377.22	0.29%	6	0.99%
	FY17	\$227,679.13	0.36%	3	0.64%
	FY18	\$58,221.32	0.15%	7	1.28%
	Study Period	\$496,745.73	0.25%	19	0.73%
Native American	FY14	\$1,554.50	0.01%	1	0.20%
	FY15	\$21,873.00	0.08%	1	0.20%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$932,277.62	1.47%	1	0.21%
	FY18	\$598,174.98	1.51%	2	0.37%
	Study Period	\$1,553,880.10	0.79%	5	0.19%
Total MBE	FY14	\$1,820,640.88	6.33%	77	15.49%
	FY15	\$1,064,692.18	4.08%	87	17.54%
	FY16	\$2,176,844.35	5.72%	59	9.70%
	FY17	\$2,328,465.00	3.67%	60	12.74%
	FY18	\$1,839,894.40	4.66%	70	12.82%
	Study Period	\$9,230,536.81	4.71%	353	13.48%
Caucasian Women	FY14	\$1,622,223.19	5.64%	37	7.44%
	FY15	\$276,951.11	1.06%	45	9.07%
	FY16	\$352,799.76	0.93%	47	7.73%
	FY17	\$3,612,142.96	5.70%	37	7.86%
	FY18	\$848,325.46	2.15%	29	5.31%
	Study Period	\$6,712,442.48	3.43%	195	7.45%
Unidentified MWBE/DBE	FY14	\$339,198.30	1.18%	8	1.61%
	FY15	\$82,436.10	0.32%	10	2.02%
	FY16	\$266,489.75	0.70%	12	1.97%
	FY17	\$163,563.50	0.26%	22	4.67%
	FY18	\$19,718.00	0.05%	5	0.92%
	Study Period	\$871,405.65	0.44%	57	2.18%
Total MWBE/DBE	FY14	\$3,782,062.37	13.14%	122	24.55%
	FY15	\$1,424,079.39	5.45%	142	28.63%
	FY16	\$2,796,133.86	7.35%	118	19.41%
	FY17	\$6,104,171.46	9.63%	119	25.27%
	FY18	\$2,707,937.86	6.85%	104	19.05%
	Study Period	\$16,814,384.94	8.59%	605	23.11%
Non-MWBE	FY14	\$24,991,657.29	86.86%	375	75.45%
	FY15	\$24,692,052.80	94.55%	354	71.37%
	FY16	\$35,229,440.43	92.65%	490	80.59%
	FY17	\$57,289,922.35	90.37%	352	74.73%
	FY18	\$36,812,717.12	93.15%	442	80.95%
	Study Period	\$179,015,789.99	91.41%	2013	76.89%
Total	FY14	\$28,773,719.67	100.00%	497	100.00%
	FY15	\$26,116,132.18	100.00%	496	100.00%
	FY16	\$38,025,574.30	100.00%	608	100.00%
	FY17	\$63,394,093.81	100.00%	471	100.00%
	FY18	\$39,520,654.97	100.00%	546	100.00%
	Study Period	\$195,830,174.93	100.00%	2618	100.00%

Table 44: Prime Utilization - Architecture & Engineering
In the Relevant Market – Hamilton County, TN
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Asian American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Caucasian Women	FY14	\$3,225.00	0.04%	1	6.67%
	FY15	\$21,198.03	0.77%	5	19.23%
	FY16	\$3,350.00	0.09%	1	5.00%
	FY17	\$1,322,702.86	30.78%	5	16.13%
	FY18	\$34,550.00	1.82%	3	33.33%
	Study Period	\$1,385,025.89	6.64%	15	14.85%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MWBE/DBE	FY14	\$3,225.00	0.04%	1	6.67%
	FY15	\$21,198.03	0.77%	5	19.23%
	FY16	\$3,350.00	0.09%	1	5.00%
	FY17	\$1,322,702.86	30.78%	5	16.13%
	FY18	\$34,550.00	1.82%	3	33.33%
	Study Period	\$1,385,025.89	6.64%	15	14.85%
Non-MWBE	FY14	\$8,097,472.53	99.96%	14	93.33%
	FY15	\$2,724,323.85	99.23%	21	80.77%
	FY16	\$3,830,881.50	99.91%	19	95.00%
	FY17	\$2,974,273.47	69.22%	26	83.87%
	FY18	\$1,861,409.85	98.18%	6	66.67%
	Study Period	\$19,488,361.20	93.36%	86	85.15%
Total	FY14	\$8,100,697.53	100.00%	15	100.00%
	FY15	\$2,745,521.88	100.00%	26	100.00%
	FY16	\$3,834,231.50	100.00%	20	100.00%
	FY17	\$4,296,976.33	100.00%	31	100.00%
	FY18	\$1,895,959.85	100.00%	9	100.00%
	Study Period	\$20,873,387.09	100.00%	101	100.00%

Table 45: Prime Utilization - Goods
In the Relevant Market – USA
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$21,947.05	0.06%	10	0.89%
	FY15	\$42,869.40	0.05%	10	0.86%
	FY16	\$31,800.00	0.07%	6	0.53%
	FY17	\$74,319.93	0.16%	8	0.74%
	FY18	\$155,383.34	0.61%	8	0.82%
	Study Period	\$326,319.72	0.14%	42	0.76%
Asian American	FY14	\$18,995.88	0.05%	4	0.36%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$9,981.30	0.02%	4	0.35%
	FY17	\$81,118.46	0.17%	3	0.28%
	FY18	\$72,679.53	0.28%	4	0.41%
	Study Period	\$182,775.17	0.08%	15	0.27%
Hispanic American	FY14	\$4,068.95	0.01%	2	0.18%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$28,787.79	0.06%	4	0.35%
	FY17	\$1,132,455.00	2.42%	1	0.09%
	FY18	\$18,584.00	0.07%	3	0.31%
	Study Period	\$1,183,895.74	0.50%	10	0.18%
Native American	FY14	\$5,743.00	0.02%	3	0.27%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$2,302.11	0.00%	1	0.09%
	FY17	\$3,375.00	0.01%	1	0.09%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$11,420.11	0.00%	5	0.09%
Total MBE	FY14	\$50,754.88	0.14%	19	1.69%
	FY15	\$42,869.40	0.05%	10	0.86%
	FY16	\$72,871.20	0.15%	15	1.32%
	FY17	\$1,291,268.39	2.76%	13	1.20%
	FY18	\$246,646.87	0.97%	15	1.53%
	Study Period	\$1,704,410.74	0.72%	72	1.31%
Caucasian Women	FY14	\$655,954.28	1.79%	43	3.82%
	FY15	\$1,828,938.76	2.29%	43	3.68%
	FY16	\$858,294.74	1.76%	46	4.06%
	FY17	\$1,045,229.15	2.23%	56	5.16%
	FY18	\$1,012,649.26	3.97%	44	4.49%
	Study Period	\$5,401,066.19	2.27%	232	4.22%
Unidentified MWBE/DBE	FY14	\$9,606.79	0.03%	5	0.44%
	FY15	\$8,789.40	0.01%	4	0.34%
	FY16	\$69,027.50	0.14%	7	0.62%
	FY17	\$20,228.93	0.04%	4	0.37%
	FY18	\$11,100.00	0.04%	3	0.31%
	Study Period	\$118,752.62	0.05%	23	0.42%
Total MWBE/DBE	FY14	\$716,315.95	1.95%	67	5.96%
	FY15	\$1,880,597.56	2.35%	57	4.88%
	FY16	\$1,000,193.44	2.05%	68	6.00%
	FY17	\$2,356,726.47	5.04%	73	6.73%
	FY18	\$1,270,396.13	4.98%	62	6.33%
	Study Period	\$7,224,229.55	3.04%	327	5.95%
Non-MWBE	FY14	\$35,978,080.91	98.05%	1058	94.04%
	FY15	\$78,119,268.61	97.65%	1112	95.12%
	FY16	\$47,819,563.00	97.95%	1066	94.00%
	FY17	\$44,421,532.70	94.96%	1012	93.27%
	FY18	\$24,243,682.30	95.02%	918	93.67%
	Study Period	\$230,582,127.53	96.96%	5166	94.05%
Total	FY14	\$36,694,396.86	100.00%	1125	100.00%
	FY15	\$79,999,866.17	100.00%	1169	100.00%
	FY16	\$48,819,756.44	100.00%	1134	100.00%
	FY17	\$46,778,259.17	100.00%	1085	100.00%
	FY18	\$25,514,078.43	100.00%	980	100.00%
	Study Period	\$237,806,357.08	100.00%	5493	100.00%

7. Subcontractor Utilization

The City does not track subcontracting dollars; therefore, in order to determine Subcontractor Utilization, GSPC conducted a Prime Vendor Questionnaire surveying all prime vendors with awards during the Study Period. GSPC conducted a subcontractor utilization analysis based on the responses from this survey. This analysis was conducted only for Construction, Professional Services, and A&E which had a significant number of responses to justify analysis.

Sub UTILIZATION is the percentage of dollars awarded to combined Subcontractors (in the Relevant Market) by ethnic/gender category.

In Construction, African American owned firms received \$11,010.00 or 2.89 percent of awards during the Study Period. No other minority subcontractors were utilized. Non-MWBE firms make up \$381,504.00 or 97.11 percent of Construction awards.

All utilization, without regard to work category, is demonstrated in Appendix F.

Table 46: Subcontractor Utilization - Construction
By Dollars in the Relevant Market – State of TN and State of KY
City of Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$11,010.00	2.89%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$11,010.00	2.89%
Caucasian Women	\$0.00	0.00%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$11,010.00	2.89%
Non-MWBE	\$370,494.00	97.11%
Total	\$381,504.00	100.00%

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In Professional Services, Caucasian Female owned firms received \$64,100.00 or 71.12 percent of awards during the Study Period. No other minority subcontractors were utilized. Non-MWBE firms make up \$24,780.00 or 27.88 percent of Professional Service awards.

Table 47: Subcontractor Utilization - Professional Services
By Dollars in the Relevant Market – Hamilton County, TN
City Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$0.00	0.00%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$0.00	0.00%
Caucasian Women	\$64,100.00	72.12%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$64,100.00	72.12%
Non-MWBE	\$24,780.00	27.88%
Total	\$88,880.00	100.00%

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In A&E, Caucasian Female owned firms received \$20,372.50 or 27.04 percent of awards during the Study Period. African American owned firms received \$12,650 or 16.79 percent of awards. Non-MWBE firms make up \$75,340.00 or 56.17 percent of Professional Service awards.

Table 48: Subcontractor Utilization - Architecture & Engineering
By Dollars in the Relevant Market – Hamilton County, TN
City of Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$12,650.00	16.79%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$12,650.00	16.79%
Caucasian Women	\$20,372.50	27.04%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$33,022.50	43.83%
Non-MWBE	\$42,317.50	56.17%
Total	\$75,340.00	100.00%

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I. Determination of Disparity

This section of the report addresses the crucial question of whether, and to what extent, there is disparity between the utilization of MBEs/WBEs as measured against their availability in the City of Chattanooga marketplace.

***DISPARITY INDICES** calculate the difference between the percentage of the City's **UTILIZATION** of MWBEs during the Study Period and the **AVAILABILITY** percentage of MWBEs.*

1. Methodology

The statistical approach to answer this question is to assess the existence and extent of disparity by comparing the MWBE utilization percentages (by dollars) to the percentage of the total pool of MWBE firms in the relevant geographic and product areas. The actual disparity derived as a result of employing this approach is measured by use of a Disparity Index (DI).

The Disparity Index is defined as the ratio of the percentage of MWBE firms utilized (U) divided by the percentage of such firms available in the marketplace, (A):

Let: U =Utilization percentage for the MWBE group
 A =Availability percentage for the MWBE group
 DI =Disparity Index for the MWBE group
 DI =U/A

The results obtained by a disparity analysis will result in one of three conclusions: overutilization, underutilization or parity. Underutilization is when the Disparity Index is below one. Overutilization is when the Disparity Index is over one. Parity, or the absence of disparity is when the Disparity Index is one (1.00) which indicates that the utilization percentage equals the availability percentage. In situations where there is availability, but no utilization, the corresponding disparity index will be zero. Finally, in cases where there is neither utilization nor availability, the corresponding disparity index is undefined and designated by a dash (-) symbol. Disparity analyses are presented separately for each procurement category and for each race/gender/ethnicity group. They are also disaggregated by year, for each year of the Study Period.

8. Prime Disparity Indices

In Table 49, Construction, for the entire Study Period, there is underutilization of MWBEs in all categories during every year of the Study Period except for FY 15 for Caucasian Female owned firms. Non-MWBEs were overutilized every year of the Study.

In Table 50, Professional Services, for the entire Study Period, there is underutilization of MWBEs in all categories during every year of the Study Period except for Caucasian Female owned firms in FY 15. Non-MWBEs are overutilized for every year except FY 15.

In Table 51, Other Services, for the entire Study Period, there is underutilization of MWBEs for all categories except for Native American owned firms who are overutilized during every year of the study period. Non-MWBEs were overutilized every year of the Study.

In Table 52, A&E, there is parity with Asian American owned firms, Hispanic American owned firms, and Native American owned firms who have no available businesses within the Relevant Market area. However, African American owned firms are underutilized for every year of the Study Period, Caucasian Female are underutilized for every year except FY 17, and Non-MWBE firms are overutilized for every year except FY 17.

In Table 53, Goods, for the overall Study Period, there is underutilization of MWBEs in all categories except Hispanic American owned firms who are overutilized in FY 17. Non-MWBEs are overutilized every year of the Study Period.

In all work categories during the Study Period, there is underutilization of MWBE firms and overutilization of Non-MWBE firms.

Table 49: Disparity Indices - Construction (Prime)
In the Relevant Market
 City of Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.07%	9.80%	0.01	SS Underutilization
	FY15	0.01%	9.80%	0.00	SS Underutilization
	FY16	0.15%	9.80%	0.01	SS Underutilization
	FY17	0.00%	9.80%	0.00	SS Underutilization
	FY18	0.00%	9.80%	0.00	SS Underutilization
	Study Period	0.03%	9.80%	0.00	SS Underutilization
Asian American	FY14	0.00%	1.06%	0.00	SS Underutilization
	FY15	0.00%	1.06%	0.00	SS Underutilization
	FY16	0.00%	1.06%	0.00	SS Underutilization
	FY17	0.00%	1.06%	0.00	SS Underutilization
	FY18	0.00%	1.06%	0.00	SS Underutilization
	Study Period	0.00%	1.06%	0.00	SS Underutilization
Hispanic American	FY14	0.00%	1.65%	0.00	SS Underutilization
	FY15	0.00%	1.65%	0.00	SS Underutilization
	FY16	0.00%	1.65%	0.00	SS Underutilization
	FY17	0.00%	1.65%	0.00	SS Underutilization
	FY18	0.00%	1.65%	0.00	SS Underutilization
	Study Period	0.00%	1.65%	0.00	SS Underutilization
Native American	FY14	0.00%	0.59%	0.00	SS Underutilization
	FY15	0.00%	0.59%	0.00	SS Underutilization
	FY16	0.00%	0.59%	0.00	SS Underutilization
	FY17	0.00%	0.59%	0.00	SS Underutilization
	FY18	0.00%	0.59%	0.00	SS Underutilization
	Study Period	0.00%	0.59%	0.00	SS Underutilization
Total MBE	FY14	0.07%	13.11%	0.00	SS Underutilization
	FY15	0.01%	13.11%	0.00	SS Underutilization
	FY16	0.15%	13.11%	0.01	SS Underutilization
	FY17	0.00%	13.11%	0.00	SS Underutilization
	FY18	0.00%	13.11%	0.00	SS Underutilization
	Study Period	0.03%	13.11%	0.00	SS Underutilization
Caucasian Women	FY14	0.32%	19.13%	0.02	SS Underutilization
	FY15	0.18%	19.13%	0.01	SS Underutilization
	FY16	0.00%	19.13%	0.00	SS Underutilization
	FY17	0.27%	19.13%	0.01	SS Underutilization
	FY18	0.67%	19.13%	0.04	SS Underutilization
	Study Period	0.20%	19.13%	0.01	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%	0.35%	0.00	SS Underutilization
	FY15	0.00%	0.35%	0.00	SS Underutilization
	FY16	0.00%	0.35%	0.00	SS Underutilization
	FY17	0.00%	0.35%	0.00	SS Underutilization
	FY18	0.00%	0.35%	0.00	SS Underutilization
	Study Period	0.00%	0.35%	0.00	SS Underutilization
Total MWBE/DBE	FY14	0.38%	32.59%	0.01	SS Underutilization
	FY15	0.19%	32.59%	0.01	SS Underutilization
	FY16	0.15%	32.59%	0.00	SS Underutilization
	FY17	0.27%	32.59%	0.01	SS Underutilization
	FY18	0.67%	32.59%	0.02	SS Underutilization
	Study Period	0.23%	32.59%	0.01	SS Underutilization
Non-MWBE	FY14	99.62%	67.41%	1.48	SS Overutilization
	FY15	99.81%	67.41%	1.48	SS Overutilization
	FY16	99.85%	67.41%	1.48	SS Overutilization
	FY17	99.73%	67.41%	1.48	SS Overutilization
	FY18	99.33%	67.41%	1.47	SS Overutilization
	Study Period	99.77%	67.41%	1.48	SS Overutilization

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Table 50: Disparity Indices– Professional Services (Prime)
In the Relevant Market
 City of Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.03%	3.41%	0.01	SS Underutilization
	FY15	1.52%	3.41%	0.45	SS Underutilization
	FY16	0.38%	3.41%	0.11	SS Underutilization
	FY17	1.24%	3.41%	0.37	SS Underutilization
	FY18	0.19%	3.41%	0.06	SS Underutilization
	Study Period	0.18%	3.41%	0.05	SS Underutilization
Asian American	FY14	0.00%	0.20%	0.00	SS Underutilization
	FY15	0.07%	0.20%	0.36	SS Underutilization
	FY16	0.02%	0.20%	0.12	SS Underutilization
	FY17	0.04%	0.20%	0.21	SS Underutilization
	FY18	0.01%	0.20%	0.04	SS Underutilization
	Study Period	0.01%	0.20%	0.04	SS Underutilization
Hispanic American	FY14	0.00%	0.50%	0.00	SS Underutilization
	FY15	0.00%	0.50%	0.00	SS Underutilization
	FY16	0.00%	0.50%	0.00	SS Underutilization
	FY17	0.00%	0.50%	0.00	SS Underutilization
	FY18	0.10%	0.50%	0.20	SS Underutilization
	Study Period	0.03%	0.50%	0.05	SS Underutilization
Native American	FY14	0.00%	0.10%	0.00	SS Underutilization
	FY15	0.00%	0.10%	0.00	SS Underutilization
	FY16	0.02%	0.10%	0.23	SS Underutilization
	FY17	0.00%	0.10%	0.00	SS Underutilization
	FY18	0.00%	0.10%	0.00	SS Underutilization
	Study Period	0.00%	0.10%	0.01	SS Underutilization
Total MBE	FY14	0.03%	4.21%	0.01	SS Underutilization
	FY15	1.59%	4.21%	0.38	SS Underutilization
	FY16	0.43%	4.21%	0.10	SS Underutilization
	FY17	1.29%	4.21%	0.31	SS Underutilization
	FY18	0.30%	4.21%	0.07	SS Underutilization
	Study Period	0.22%	4.21%	0.05	SS Underutilization
Caucasian Women	FY14	0.03%	5.21%	0.01	SS Underutilization
	FY15	29.79%	5.21%	5.72	SS Overutilization
	FY16	0.64%	5.21%	0.12	SS Underutilization
	FY17	0.86%	5.21%	0.17	SS Underutilization
	FY18	0.19%	5.21%	0.04	SS Underutilization
	Study Period	0.56%	5.21%	0.11	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%	0.70%	0.00	SS Underutilization
	FY15	0.07%	0.70%	0.10	SS Underutilization
	FY16	0.00%	0.70%	0.00	SS Underutilization
	FY17	0.00%	0.70%	0.00	SS Underutilization
	FY18	0.00%	0.70%	0.00	SS Underutilization
	Study Period	0.00%	0.70%	0.00	SS Underutilization
Total MWBE/DBE	FY14	0.06%	10.12%	0.01	SS Underutilization
	FY15	31.46%	10.12%	3.11	SS Overutilization
	FY16	1.07%	10.12%	0.11	SS Underutilization
	FY17	2.15%	10.12%	0.21	SS Underutilization
	FY18	0.49%	10.12%	0.05	SS Underutilization
	Study Period	0.78%	10.12%	0.08	SS Underutilization
Non-MWBE	FY14	99.94%	89.88%	1.11	SS Overutilization
	FY15	68.54%	89.88%	0.76	SS Underutilization
	FY16	98.93%	89.88%	1.10	SS Overutilization
	FY17	97.85%	89.88%	1.09	Overutilization
	FY18	99.51%	89.88%	1.11	SS Overutilization
	Study Period	99.22%	89.88%	1.10	SS Overutilization

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Table 51: Disparity Indices– Other Services (Prime)
In the Relevant Market
 City of Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	5.48%	7.88%	0.70	SS Underutilization
	FY15	3.62%	7.88%	0.46	SS Underutilization
	FY16	5.43%	7.88%	0.69	SS Underutilization
	FY17	1.79%	7.88%	0.23	SS Underutilization
	FY18	2.50%	7.88%	0.32	SS Underutilization
	Study Period	3.43%	7.88%	0.43	SS Underutilization
Asian American	FY14	0.83%	0.98%	0.85	Underutilization
	FY15	0.00%	0.98%	0.00	SS Underutilization
	FY16	0.00%	0.98%	0.00	SS Underutilization
	FY17	0.05%	0.98%	0.05	SS Underutilization
	FY18	0.49%	0.98%	0.50	SS Underutilization
	Study Period	0.24%	0.98%	0.24	SS Underutilization
Hispanic American	FY14	0.01%	1.12%	0.01	SS Underutilization
	FY15	0.37%	1.12%	0.33	SS Underutilization
	FY16	0.29%	1.12%	0.26	SS Underutilization
	FY17	0.36%	1.12%	0.32	SS Underutilization
	FY18	0.15%	1.12%	0.13	SS Underutilization
	Study Period	0.25%	1.12%	0.23	SS Underutilization
Native American	FY14	0.01%	0.29%	0.02	SS Underutilization
	FY15	0.08%	0.29%	0.29	SS Underutilization
	FY16	0.00%	0.29%	0.00	SS Underutilization
	FY17	1.47%	0.29%	5.11	SS Overutilization
	FY18	1.51%	0.29%	5.26	SS Overutilization
	Study Period	0.79%	0.29%	2.76	SS Overutilization
Total MBE	FY14	6.33%	10.27%	0.62	SS Underutilization
	FY15	4.08%	10.27%	0.40	SS Underutilization
	FY16	5.72%	10.27%	0.56	SS Underutilization
	FY17	3.67%	10.27%	0.36	SS Underutilization
	FY18	4.66%	10.27%	0.45	SS Underutilization
	Study Period	4.71%	10.27%	0.46	SS Underutilization
Caucasian Women	FY14	5.64%	9.27%	0.61	SS Underutilization
	FY15	1.06%	9.27%	0.11	SS Underutilization
	FY16	0.93%	9.27%	0.10	SS Underutilization
	FY17	5.70%	9.27%	0.61	SS Underutilization
	FY18	2.15%	9.27%	0.23	SS Underutilization
	Study Period	3.43%	9.27%	0.37	SS Underutilization
Unidentified MWBE/DBE	FY14	1.18%	0.81%	1.46	SS Overutilization
	FY15	0.32%	0.81%	0.39	SS Underutilization
	FY16	0.70%	0.81%	0.87	Underutilization
	FY17	0.26%	0.81%	0.32	SS Underutilization
	FY18	0.05%	0.81%	0.06	SS Underutilization
	Study Period	0.44%	0.81%	0.55	SS Underutilization
Total MWBE/DBE	FY14	13.14%	20.35%	0.65	SS Underutilization
	FY15	5.45%	20.35%	0.27	SS Underutilization
	FY16	7.35%	20.35%	0.36	SS Underutilization
	FY17	9.63%	20.35%	0.47	SS Underutilization
	FY18	6.85%	20.35%	0.34	SS Underutilization
	Study Period	8.59%	20.35%	0.42	SS Underutilization
Non-MWBE	FY14	86.86%	79.65%	1.09	Overutilization
	FY15	94.55%	79.65%	1.19	SS Overutilization
	FY16	92.65%	79.65%	1.16	SS Overutilization
	FY17	90.37%	79.65%	1.13	SS Overutilization
	FY18	93.15%	79.65%	1.17	SS Overutilization
	Study Period	91.41%	79.65%	1.15	SS Overutilization

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**Table 52: Disparity Indices– Architecture & Engineering (Prime)
In the Relevant Market
City of Chattanooga Disparity Study**

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.00%	3.33%	0.00	SS Underutilization
	FY15	0.00%	3.33%	0.00	SS Underutilization
	FY16	0.00%	3.33%	0.00	SS Underutilization
	FY17	0.00%	3.33%	0.00	SS Underutilization
	FY18	0.00%	3.33%	0.00	SS Underutilization
	Study Period	0.00%	3.33%	0.00	SS Underutilization
Asian American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Hispanic American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Native American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Total MBE	FY14	0.00%	3.33%	0.00	SS Underutilization
	FY15	0.00%	3.33%	0.00	SS Underutilization
	FY16	0.00%	3.33%	0.00	SS Underutilization
	FY17	0.00%	3.33%	0.00	SS Underutilization
	FY18	0.00%	3.33%	0.00	SS Underutilization
	Study Period	0.00%	3.33%	0.00	SS Underutilization
Caucasian Women	FY14	0.04%	12.22%	0.00	SS Underutilization
	FY15	0.77%	12.22%	0.06	SS Underutilization
	FY16	0.09%	12.22%	0.01	SS Underutilization
	FY17	30.78%	12.22%	2.52	SS Overutilization
	FY18	1.82%	12.22%	0.15	SS Underutilization
	Study Period	6.64%	12.22%	0.54	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Total MWBE/DBE	FY14	0.04%	15.56%	0.00	SS Underutilization
	FY15	0.77%	15.56%	0.05	SS Underutilization
	FY16	0.09%	15.56%	0.01	SS Underutilization
	FY17	30.78%	15.56%	1.98	SS Overutilization
	FY18	1.82%	15.56%	0.12	SS Underutilization
	Study Period	6.64%	15.56%	0.43	SS Underutilization
Non-MWBE	FY14	99.96%	84.44%	1.18	SS Overutilization
	FY15	99.23%	84.44%	1.18	SS Overutilization
	FY16	99.91%	84.44%	1.18	SS Overutilization
	FY17	69.22%	84.44%	0.82	Underutilization
	FY18	98.18%	84.44%	1.16	SS Overutilization
	Study Period	93.36%	84.44%	1.11	SS Overutilization

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Table 53: Disparity Indices– Goods (Prime)
In the Relevant Market
 City of Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.06%	2.50%	0.02	SS Underutilization
	FY15	0.05%	2.50%	0.02	SS Underutilization
	FY16	0.07%	2.50%	0.03	SS Underutilization
	FY17	0.16%	2.50%	0.06	SS Underutilization
	FY18	0.61%	2.50%	0.24	SS Underutilization
	Study Period	0.14%	2.50%	0.05	SS Underutilization
Asian American	FY14	0.05%	0.93%	0.06	SS Underutilization
	FY15	0.00%	0.93%	0.00	SS Underutilization
	FY16	0.02%	0.93%	0.02	SS Underutilization
	FY17	0.17%	0.93%	0.19	SS Underutilization
	FY18	0.28%	0.93%	0.31	SS Underutilization
	Study Period	0.08%	0.93%	0.08	SS Underutilization
Hispanic American	FY14	0.01%	0.65%	0.02	SS Underutilization
	FY15	0.00%	0.65%	0.00	SS Underutilization
	FY16	0.06%	0.65%	0.09	SS Underutilization
	FY17	2.42%	0.65%	3.74	SS Overutilization
	FY18	0.07%	0.65%	0.11	SS Underutilization
	Study Period	0.50%	0.65%	0.77	SS Underutilization
Native American	FY14	0.02%	0.34%	0.05	SS Underutilization
	FY15	0.00%	0.34%	0.00	SS Underutilization
	FY16	0.00%	0.34%	0.01	SS Underutilization
	FY17	0.01%	0.34%	0.02	SS Underutilization
	FY18	0.00%	0.34%	0.00	SS Underutilization
	Study Period	0.00%	0.34%	0.01	SS Underutilization
Total MBE	FY14	0.14%	4.41%	0.03	SS Underutilization
	FY15	0.05%	4.41%	0.01	SS Underutilization
	FY16	0.15%	4.41%	0.03	SS Underutilization
	FY17	2.76%	4.41%	0.63	SS Underutilization
	FY18	0.97%	4.41%	0.22	SS Underutilization
	Study Period	0.72%	4.41%	0.16	SS Underutilization
Caucasian Women	FY14	1.79%	7.62%	0.23	SS Underutilization
	FY15	2.29%	7.62%	0.30	SS Underutilization
	FY16	1.76%	7.62%	0.23	SS Underutilization
	FY17	2.23%	7.62%	0.29	SS Underutilization
	FY18	3.97%	7.62%	0.52	SS Underutilization
	Study Period	2.27%	7.62%	0.30	SS Underutilization
Unidentified MWBE/DBE	FY14	0.03%	0.25%	0.10	SS Underutilization
	FY15	0.01%	0.25%	0.04	SS Underutilization
	FY16	0.14%	0.25%	0.56	SS Underutilization
	FY17	0.04%	0.25%	0.17	SS Underutilization
	FY18	0.04%	0.25%	0.17	SS Underutilization
	Study Period	0.05%	0.25%	0.20	SS Underutilization
Total MWBE/DBE	FY14	1.95%	12.29%	0.16	SS Underutilization
	FY15	2.35%	12.29%	0.19	SS Underutilization
	FY16	2.05%	12.29%	0.17	SS Underutilization
	FY17	5.04%	12.29%	0.41	SS Underutilization
	FY18	4.98%	12.29%	0.41	SS Underutilization
	Study Period	3.04%	12.29%	0.25	SS Underutilization
Non-MWBE	FY14	98.05%	87.71%	1.12	SS Overutilization
	FY15	97.65%	87.71%	1.11	SS Overutilization
	FY16	97.95%	87.71%	1.12	SS Overutilization
	FY17	94.96%	87.71%	1.08	Overutilization
	FY18	95.02%	87.71%	1.08	Overutilization
	Study Period	96.96%	87.71%	1.11	SS Overutilization

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9. Subcontractor Disparity Indices

Similar to prime contractor utilization, there were statistically significant disparities in subcontractor utilization which were reflected in the subcontractor Disparity Indices. Conversely, Non-MWBE firms were found to be statistically significantly overutilized in Construction but underutilized in Professional Services and A&E subcontracting.

In Construction, all MWBE groups were found to be statistically significantly underutilized, with a 2.89 percent total MWBE utilization. In Professional Services, MWBEs are collectively statistically significantly overutilized, however when breaking down the analysis by ethnicity, no MBE professional service firms were recipients of any subcontract awards. Caucasian Female owned firms, on the other hand, received 72.12 percent of all of the Professional Services subcontract awards measured in this analysis.

Interestingly, in A&E, African American owned firms and Caucasian owned firms were both statistically significantly overutilized leading to overutilization of Total MWBE/DBE firms, Caucasian Female owned firms, and MBE firms. This is partly influenced by a finding of parity for Asian American owned firms, Hispanic American owned firms, and Native American owned firms, where there was no identified availability or utilization. Total subcontractor utilization can be found in the following tables.

Table 54: Disparity Indices– Construction (Subcontractors)
From Chattanooga Prime Vendor Questionnaire
City of Chattanooga Disparity Study

Ethnicity	Percent of Dollars	Percent of Available Firms	Disparate Impact of Utilization
African American	2.89%	9.80%	SS Underutilization
Asian American	0.00%	1.06%	SS Underutilization
Hispanic American	0.00%	1.65%	SS Underutilization
Native American	0.00%	0.59%	SS Underutilization
Total MBE	2.89%	13.11%	SS Underutilization
Caucasian Female	0.00%	19.13%	SS Underutilization
Unidentified MWBE/DBE	0.00%	0.35%	SS Underutilization
Total MWBE/DBE	2.89%	32.59%	SS Underutilization
Non-MWBE	97.11%	67.41%	SS Overutilization

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Table 55: Disparity Indices– Professional Services (Subcontractors)
 From Chattanooga Prime Vendor Questionnaire
 City of Chattanooga Disparity Study

Ethnicity	Percent of Dollars	Percent of Available Firms	Disparate Impact of Utilization
African American	0.00%	3.41%	SS Underutilization
Asian American	0.00%	0.20%	SS Underutilization
Hispanic American	0.00%	0.50%	SS Underutilization
Native American	0.00%	0.10%	SS Underutilization
Total MBE	0.00%	4.21%	SS Underutilization
Caucasian Female	72.12%	5.21%	SS Overutilization
Unidentified MWBE/DBE	0.00%	0.70%	SS Underutilization
Total MWBE/DBE	72.12%	10.12%	SS Overutilization
Non-MWBE	27.88%	89.88%	SS Underutilization

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Table 56: Disparity Indices– A&E (Subcontractors)
 From Chattanooga Prime Vendor Questionnaire
 City of Chattanooga Disparity Study

Ethnicity	Percent of Dollars	Percent of Available Firms	Disparate Impact of Utilization
African American	16.79%	3.33%	SS Overutilization
Asian American	0.00%	0.00%	Parity
Hispanic American	0.00%	0.00%	Parity
Native American	0.00%	0.00%	Parity
Total MBE	16.79%	3.33%	SS Overutilization
Caucasian Female	27.04%	12.22%	SS Overutilization
Unidentified MWBE/DBE	0.00%	0.00%	Parity
Total MWBE/DBE	43.83%	15.56%	SS Overutilization
Non-MWBE	56.17%	84.44%	SS Underutilization

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J. Determining the Significance of Disparity Indices

The determination that a particular race/ethnicity/gender group has been overutilized or underutilized is not, standing alone, proof of discrimination. Typically, the determination of whether a disparity is “statistically significant” can be based on the depth of the disparity, in that any disparity index that is less than .80 is considered to be a statistically significant underutilization and any disparity index over 1.10 is considered to be a statistically significant overutilization. The disparity indices impact as designated in

Tables 27-32 as “overutilization,” “underutilization,” or “parity” have been bolded to indicate such statistically significant impact.

Typically, the determination of whether a disparity is “substantially significant” can be based on any disparity index that is less than .80. Further, GSPC uses a statistical test that considers whether or not the typical disparity index across all vendor categories is equal to unity. This constitutes a null hypothesis of “parity.” The test estimates the probability that the typical disparity index departs from unity, and the magnitude of the calculated test statistic indicates whether there is typically underutilization or overutilization. Statistical significance tests were performed for each disparity index derived for each MBE/WBE group and in each procurement category. This approach to statistical significance is consistent with the case law and the Transportation Research Board approach to statistical significance in disparity studies.

The existence of a statistically significant disparity between the availability and utilization of MWBEs that is determined to likely be the result of the owners’ race, gender, or ethnicity will impact the recommendations provided as a result of this Study. GSPC will, in such a case, make recommendations for appropriate and narrowly tailored race/ethnicity/gender-neutral remedies for this discrimination to give all firms equal access to public contracting with the City. GSPC will also, if appropriate, recommend narrowly tailored race/ethnicity/gender-conscious remedies. If no statistically significant disparity is found to exist, or if such a disparity is not determined to be a likely result of firm owners’ race, ethnicity, or gender on their success in the marketplace, GSPC may still make recommendations to support the continuation of engagement, outreach, small business development, and non-discrimination policies in the procurement processes of the City of Chattanooga.

K. Conclusion

Generally, throughout the Study Period, every MWBE group was underutilized in each category in total, as prime contractors. As subcontractors, African American owned firms were found to be overutilized in A&E, and Caucasian Female owned firms were found to be overutilized in A&E and Professional Services. However, all of these analyses demonstrated, with few exceptions, underutilization of MWBE groups in each procurement category. Further econometric analysis of disparities is contained in Chapter VI.

VI. CITY OF CHATTANOOGA PRIVATE SECTOR ANALYSIS

A. Introduction

In this section GSPC considers the market entry, private sector, public contracting and subcontracting outcomes and experiences of minority owned firms relative to Non-MWBE owned firms in the relevant Chattanooga Tennessee-Georgia Metropolitan Statistical Area (“CTGMSA”)—the Relevant Market for GSPC’s analysis. This private sector analysis utilizes data from business firms that are either willing and able, or have actually contracted/subcontracted with the City of Chattanooga, with the aim of determining if the likelihood of successful contracting/subcontracting opportunities—actual and perceived—with the City of Chattanooga is conditioned in a statistically significant manner on the race, ethnicity, or gender status of business owners. Such an analysis is a useful and important complement to estimating simple disparity indexes, which assume all things important for success and failure are equal among business firms competing for public contracts, and are based on unconditional moments—statistics that do not necessarily inform causality or the source of differences across such statistics. As simple disparity indexes do not condition on possible confounders of new business firm entry, and success and failure in public sector contracting/subcontracting by business firms, they are only suggestive of disparate treatment, and their implied likelihood of success/failure could be biased.

GSPC’s analysis posits that there are possible confounders of success and failure in the entry of new business firms in the market and public sector contracting/subcontracting that are sources of heterogeneity among business firms that lead to differences in success and failure. Failure to condition on the sources of heterogeneity in success/failure in new business firm formation and public sector contracting/subcontracting outcomes can leave simple disparity indexes devoid of substantive policy implications as they ignore the extent to which business firm owners’ race/ethnicity/gender characteristics are causal factors. Disparate outcomes could possibly reflect in part or in whole outcomes driven by disparate business firm characteristics that matter fundamentally for success/failure in the formation of new firms and public sector contracting/subcontracting outcomes. If the race, ethnicity, or gender status of a business firm owner conditions lower likelihoods of success/failure, this would be suggestive of these salient and mostly immutable characteristics causing the observed disparities.

A broad context for considering disparities by business firm ownership status can be informed by considering private sector outcomes in the CTGMSA. The success and failure of SMWBE firms in public contracting could be conditioned by their outcomes in the private sector regarding their formation as new business enterprises willing and able to engage in public contracting, and their revenue generating capacity. The value of a descriptive and inferential model-based private sector analysis is that it situates disparity analyses in the “but-for-justification.” Ian Ayres and Frederick Vars (1998), in their consideration of the constitutionality of public affirmative action programs posit a scenario in which private suppliers of financing systematically exclude or charge higher prices to minority businesses, which potentially increases the cost of which minority owned businesses can provide services required under public contracts relative to Non-MWBE owned businesses.⁴⁹ This private discrimination means that minority owned firms may only have recourse to higher cost financing due to facing discrimination in private sector capital markets, which compromises the competitiveness of their bids. Such a perspective on discrimination suggests that barriers

⁴⁹ See: Ayres, Ian, and Fredrick E. Vars. 1998, “When does private discrimination justify public affirmative action?” *Columbia Law Review*, 98: 1577-1641.

faced by minority owned firms in the private sector can rationalize targeted contracting programs by political jurisdictions, as the counterfactual is that in the *absence of such private sector discrimination*, they would be able to compete with other firms in bidding for public contracts.

Table 57 reports on firm ownership type and revenue for the CTGMSA from the US Census Bureau's 2012 Survey of Business Owners (SBO).⁵⁰ The SBO Data are collected every 5 years since 1972, for years ending in "2" and "7" as part of the economic census. The program began as a special project for minority owned businesses in 1969 and was incorporated into the economic census in 1972 along with the Survey of Females Owned Businesses. The GSPC descriptive private sector analysis considers the percentage of representation in the population of firms and revenue across the firm ownership type classifications.

For the CTGMSA, Table 57 reveals that relative to Caucasian owned firms, the revenue shares of each minority owned firm never exceeds 3.3 percent (Females).⁵¹ While the majority of the minority firm revenues are suppressed for confidentiality, for those with reportable revenue shares, the sum of the revenue shares of other MWBEs does not exceed that of MWBEs owned by Females. Relative to firms owned by Caucasians in the CTGMSA Market Area, exclusive of Females owned firms—some of whom are Caucasian—the MWBE revenue shares are an order of magnitude below their firm representation shares, consistent with and suggestive of—but not necessarily causal evidence for—MWBEs facing discriminatory barriers in the private sector of the CTGMSA.⁵²

⁵⁰ SBO data are publicly available at <http://www.census.gov/programs-surveys/sbo/data.html>. While 2015 data are available, as of 3/3/2019 firm total revenue data were not yet made publicly available.

⁵¹ The percentages do not “add-up” to one, as the Females ownership category is not “mutually exclusive” of the other race/ethnicity categories.

⁵² This can be ascertained by simply computing the ratio of each MWBE's firm share to total revenue share. For example, in the case of firms owned by African Americans, this ratio is approximately six (6) percent, in contrast to approximately 41 percent for firms owned by Caucasians. In this context, relative to firms owned by Caucasians, firms owned by African Americans are far more “revenue underrepresented” with respect to their firm share.

Table 57: Firm Ownership Type and Revenue Characteristics
In CTGMSA Market Area
 2012 Survey of Business Owners
 City of Chattanooga Disparity Study

Ownership Structure	Number of Firms	Percentage of all Firms (approximate)	Market Area Total Revenue (\$1,000)	Percentage of Market Area Total Revenue (approximate)
All	43338	100	51,009,193	100
Caucasian Female	13307	.3071	1,722,607	.0333
White	37298	.8605	18,452,190	.3529
African American	2,945	.0674	262700	.0051
American Indian & Alaskan Native	376	.0087	98303	.0019
Asian	1,257	.0290	Suppressed ^a	Suppressed ^a
Asian Indian	489	.0113	Suppressed ^a	Suppressed ^a
Chinese	112	.0026	54,598	.0011
Filipino	36	.0008	Suppressed ^a	Suppressed ^a
Korean	189	.0044	46,590	.0009
Vietnamese	268	.0062	18,600	.0004
Other Asian	157	.0036	Suppressed ^a	Suppressed ^a
Hispanic	966	.0223	350,516	.0068
Some Other Race	409	.0094	157,720	.0031
Publicly Held and not classifiable by race, gender, ethnicity	1386	.0319	30,585481	.5980

Source: US Census Bureau 2012 Survey of Business Owners. ^aValue suppressed to preserve confidentiality as a result of very few firms or there are one or two large firms that dominate the statistic.

Given that publicly held firms are not usually classifiable by MWBE status, and account for a disproportionate share of revenues, a simple comparison of a MWBE firm and revenue share may not inform the existence of any private sector disparities with precision. In this context, the ratio of a MWBE firm share to revenue share may be more informative of disparities. For example, in the case of firms owned by African Americans, this ratio is (.0674)/ (.0051) or approximately 13.22, suggesting that the revenue share of firms owned by African Americans would have to increase by a factor of approximately 13 to achieve firm share parity in the CTGMSA Market Area. This is in contrast to a ratio of (.8605)/ (.3529) or approximately 2.44 for Caucasian owned firms. This suggests that relative to Caucasian owned firms, MWBE’s such as those owned by African Americans have a firm share revenue disparity. This is suggestive of, but not necessarily causal evidence for, MWBEs facing discriminatory barriers in the private sector of the CTGMSA.

Table 58 replicates Table 57 to the extent the SBO data enable, for the CTGMSA construction sector—a sector which is a significant venue for public sector contracting.⁵³ For three (3) of the MWBE construction

⁵³ For the construction sector, 2013 SBO data do not provide detailed disaggregated race/ethnicity detail to the same extent as for all sectors.

firms in the CTGMSA, which is a majority of the MWBE classifiable firms in the construction sector, revenues were suppressed due to confidentiality issues. Regarding firm revenue disparities relative to Caucasian owned firms, those owned by Native Americans and Alaskan Natives do not have a revenue disparity, whereas those owned by Females do have a revenue disparity. As in the case of the private sector in Table 58, this is suggestive of, but not necessarily causal evidence for, MWBEs owned by Females facing discriminatory barriers in the private Construction sector of the CTGMSA.

Table 58: Firm Ownership Type and Revenue Characteristics
 CTGMSA Market Area Construction Sector
 2012 Survey of Business Owners
 City of Chattanooga Disparity Study

Ownership Structure	Number of Firms	Percentage of all Firms (approximate)	Market Area Total Revenue (\$1,000)	Percentage of Market Area Total Revenue (approximate)
All	6,171	100	2,379,781	100
Caucasian Female	512	.0829	147,236	.0619
White	5741	.9303	2,129,982	.9130
African American	158	.0256	Suppressed ^a	Suppressed ^a
American Indian & Alaskan Native	86	.0139	57,445	.0241
Hispanic	171	.0277	Suppressed ^a	Suppressed ^a
Some Other Race	64	.0104	Suppressed ^a	Suppressed ^a
Publicly Held and not classifiable by race, gender, ethnicity	170	.0275	230,957	.0971

Source: US Census Bureau 2012 Survey of Business Owners. ^aValue suppressed to preserve confidentiality as a result of very few firms or there are one or two large firms that dominate the statistic.

Source: US Census Bureau 2013 Survey of Business Owners. ^aValue suppressed to preserve confidentiality as a result of very few firms or there are one or two large firms that dominate the statistic.

Overall, the descriptive summary in Tables 57 and 58 suggests that in the CTGMSA private sector and in the Construction sector, MWBEs face barriers that translate into lower firm revenues. In general, if being an MWBE in the CTGMSA private sector is associated with lower firm revenue, this lends some support to the “but-for” justification for affirmative action in public procurement. Lower revenues for MWBEs in the CTGMSA Market Area is suggestive of private discrimination that undermines their capacity to compete with Non-MWBE owned firms for public contracting opportunities. This could motivate a private discrimination justification for Affirmative Action in the City of Chattanooga procurement policies, otherwise the City is potentially a *passive participant* in private discrimination against MWBEs with respect to its procurement practices.

To explicitly examine potential disparities in the rates of business ownership in the CTGMSA Area, GSPC

estimated the parameters of a Logit model using 2017 American Community Survey (ACS) data.⁵⁴ The ACS is a project of the U.S. Census Bureau that has replaced the decennial census as the key source of information about American population and housing characteristics. The 2017 ACS is an approximately 1-in-100 weighted public use sample consisting of U.S. households with the smallest identifiable unit being the Public Use Microdata Unit (PUMA), which is a geographic area containing at least 100,000 individuals. The specification of each model control for those variables is customary in the literature utilized to explain self-employment, so as to estimate the effects of MWBE status on self-employment while minimizing and/or eliminating confounding factors.⁵⁵ GSPC determines statistical significance on the basis of the estimated coefficient's probability value—or P-value. The P-value is the probability of obtaining an estimate of the coefficient by chance alone, assuming that the null hypothesis of the variable having a zero effect is true. As a convention, GSPC rejects the null hypothesis of no effect, and concludes the estimated coefficient is statistically significant as long as $P\text{-value} \leq .10$, which GSPC highlights in bold for all parameter estimates

In the GSPC Logit model of self-employment, the estimated parameters are odds ratios. When greater (less) than unity, these ratios indicate that having a particular characteristic increases (decreases) the likelihood of being self-employed. In the case of the MWBE status indicators (e.g., African American, Female), the excluded category is Caucasian Males, and a positive (negative) odds ratio indicates that relative to Caucasian Males, having that MWBE characteristic increases (decreases) the likelihood of being self-employed in the CTGMSA Market Area.

Table 59 reports parameter estimates across all business sectors in the CTGMSA Market Area. The estimated odds ratios with statistical significance suggest that Females, African Americans, Hispanic Americans, and Pacific Islander Americans are less likely to be self-employed than Caucasian Males in the CTGMSA Market Area. Other Race Americans on the other hand, are relatively more likely to be self-employed. In the case of Females, African Americans, Hispanic Americans and Pacific Islander Americans, these odds ratios estimates are suggestive of barriers to self-employment for these MWBEs in the CTGMSA Market Area, which could be ameliorated through successful MWBE public contracting programs that induce MWBE firm entry. Chatterji, Chay, and Fairlie (2014) find that the self-employment rate of African Americans is increasing with respect to the provisioning and establishment of MWBE set-aside public procurement programs.⁵⁶

Table 60 reports parameter estimates for the Construction sector in the CTGMSA Market Area—an important sector in the market for public procurement. The estimated odds ratios with statistical significance suggest that Females, African Americans, Native Americans, and Pacific Islander Americans are less likely to be self-employed in the CTGMSA Market Area Construction sector. The estimated odds ratios estimates are suggestive of barriers to self-employment in the Construction sector for these MWBEs

⁵⁴ ACS data are publicly available at <https://usa.ipums.org/usa/>. See: Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2017. *Integrated Public Use Microdata Series: Version 7.0* [dataset]. Minneapolis: University of Minnesota. <https://doi.org/10.18128/D010.V7.0>.

⁵⁵ See: Grilo, Isabel, and Roy Thurik. 2008. "Determinants of Entrepreneurial Engagement Levels in Europe and the US." *Industrial and Corporate Change* 17: pp. 1113-1145, and Van der Sluis, Justin, Mirjam Van Praag, and Wim Vijverberg. 2008. "Education and Entrepreneurship Selection and Performance: A Review of the Empirical Literature." *Journal of economic surveys* 22: pp. 795-841.

⁵⁶ Chatterji, Aaron K., Kenneth Y. Chay, and Robert W. Fairlie. 2014. "The Impact of City Contracting Set-asides on Black Self-employment and Employment." *Journal of Labor Economics* 32: pp. 507-561.

in the CTGMSA Market Area which could be ameliorated through successful MWBE public contracting programs that induce MWBE firm entry. Marion (2009) finds that the self-employment rate of African Americans in Construction is increasing with respect to the provisioning and establishment of MWBE set-aside public construction procurement programs.⁵⁷ In this context, the existence of a proportionality between MWBE entry and set-asides in the public sector Construction sector (Marion, 2009) suggests that the Logit parameter estimates in Table 32 could be informing, at least in part, disparities in the awarding of public sector construction projects in the CTGMSA Market Area.

Table 59: Self-Employment/Business Ownership Model Logit Parameter Odds Ratio Estimates

*The 2017 American Community Survey
City of Chattanooga Disparity Study*

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Self-Employment in The CTGMSA Market Area (Binary)			
<i>Regressors:</i>			
Constant	.0382	.0031	.0000
Age	1.12	.0146	.0000
Age-Squared	1.11	.0041	.0315
Married	1.04	.0124	.0137
Caucasian Female	.8147	.0318	.0024
African American	.7313	.0038	.0012
Hispanic American	.9649	.0632	.1453
Native American	.9038	.0237	.0483
Pacific Islander American	.9246	.0862	.0936
Asian American	.8682	.0417	.1648
Other Race American	1.03	.1143	.1573
College Degree	1.24	.0451	.0321
Speaks English Only	1.06	.0157	.0682
Disabled	.8146	.2891	.0314
Value of Home (\$)	1.27	.0172	.0000
Interest, Dividend, and Rental Income (\$)	1.06	.0236	.0000
Mortgage Payment (\$)	.9731	.0424	.1243
Number of Observations	5,397		
<i>Pseudo-R²</i>	.082		

Bold P-value indicates statistical significance level of .10 or lower.

Source of Data: American Community Survey 2017, IPUMs USA

⁵⁷ Marion, Justin. 2009. "Firm Racial Segregation and Affirmative Action in the Highway Construction Industry." *Small Business Economics* 33: Article 441.

*Table 60: Construction Sector Self-Employment/Business Ownership Model Logit Parameter Odds Ratio Estimates
The 2017 American Community Survey
City of Chattanooga Disparity Study*

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Self-Employment in The CTGMSA Market Area (Binary)			
<i>Regressors:</i>			
Constant	.0315	.0121	.0000
Age	1.05	.0162	.0247
Age-Squared	1.03	.0003	.0937
Married	1.18	.1353	.0648
Caucasian Female	.2316	.0148	.0000
African American	.1602	.0315	.0274
Hispanic American	.8401	.4337	.1726
Native American	.7135	.1014	.0938
Pacific Islander American	.5804	.1042	.0273
Asian American	.8279	.0271	.1352
Other Race American	1.07	.3415	.1387
College Degree	1.14	.1624	.1938
Speaks English Only	.8624	.2148	.1743
Disabled	.7825	1.41	.1463
Value of Home (\$)	1.25	.0341	.0483
Interest, Dividend, and Rental Income (\$)	1.03	.0247	.1381
Mortgage Payment (\$)	1.01	.0001	.3401
Number of Observations	5,397		
<i>Pseudo-R²</i>	.063		

Bold P-value indicates statistical significance level of .10 or lower.

Source of Data: American Community Survey 2017, IPUMs USA

B. GSPC Data

Our City of Chattanooga disparity analysis is based on survey data compiled by GSPC, and constitutes a sample of firms from the bidder and vendor lists provided by the City of Chattanooga. The GSPC survey questionnaire captured data on firm and individual owner characteristics. GSPC research indicates that MWBE status conditions success/failure with the City of Chattanooga in public contracting opportunities. In this analysis, use of the data in the GSPC survey is limited to the measured covariates that are best suited for evaluating the extent to which MWBE status is a possible cause of public contracting disparities based on race, ethnicity, and gender in the City of Chattanooga. Table 61 reports, for the 221 survey responses available, a summary of the description, mean and standard deviation of the covariates from the GSPC survey that are relevant to the analysis, and utilized as regressors and regressands in the econometric specifications.

Table 61: Covariate Summary
City of Chattanooga Disparity Study

Covariate	Description	Mean	Standard Deviation	Number of Observations
Number of Prime Contractor Bids Submitted to City of Chattanooga: 2013 - 2018	<i>Categorical Variable:</i> 1 = Zero bids 2 = 1 - 10 bids 3 = 11 - 25 bids 4 = 26 - 50 bids 5 = 51 - 100 bids 6 = More than 100 bids	1.12	.7125	221
Firm Entered Market Between 2013 - 2018	<i>Binary Variable:</i> 1 = Yes	.1403	.3480	221
Did not Serve as a Prime Contractor On a City of Chattanooga Project: 2013 - 2018	<i>Binary Variable:</i> 1 = Yes	.7104	.4546	221
Did not serve as a Subcontractor On a City of Chattanooga Project: 2013 - 2017	<i>Binary Variable:</i> 1 = Yes	.7376	.4409	221
Bid Bond Requirements Are a Barrier To Submitting Bids And Securing Contracts From City of Chattanooga	<i>Binary Variable:</i> 1 = Yes	.0634	.2441	221
Financing is a Barrier to Submitting Bids and Securing Contracts From City of Chattanooga	<i>Binary Variable:</i> 1 = Yes	.0543	.2271	221
Gross Revenue of at Least \$1,500,00 Bonding Limit at	<i>Binary Variable:</i> 1 = Yes	.2895	.4536	221
	<i>Binary Variable:</i>	.1403	.3481	221

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Least \$1,500,00	1 = Yes			
Number of Times	<i>Categorical Variable:</i>	.7647	.5868	221
Rejected for A Bank	1 = None			
Loan: 2013 - 2017	2 = 1 – 10 times			
	3 = 11 – 25 times			
	4 = 26 – 50 times			
	5 = 51 – 100 times			
	6 = Over 100 times			
Majority Firm Owner	<i>Binary Variable:</i>	.2624	.4409	221
Is African American	1 = Yes			
Majority Firm Owner	<i>Binary Variable:</i>	.0136	.1159	221
Is Asian-American	1 = Yes			
Majority Firm Owner	<i>Binary Variable:</i>	.0317	.1755	221
Is Hispanic	1 = Yes			
Majority Firm Owner	<i>Binary Variable:</i>	.0181	.1336	221
Is Native American	1 = Yes			
Majority Firm Owner	<i>Binary Variable:</i>	.0226	.1490	221
Is Other Race	1 = Yes			
Majority Firm Owner	<i>Binary Variable:</i>	.5249	.5005	221
Is a Female	1 = Yes			
Firm Owner Has	<i>Binary Variable:</i>	.5520	.4984	221
More Than Twenty	1 = Yes			
Years of Experience				
Firm Has More Than	<i>Binary Variable:</i>	.8959	.3060	221
Ten Employees	1 = Yes			
Firm Owner has a	<i>Binary Variable:</i>	.4118	.4933	221
Baccalaureate Degree	1 = Yes			

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C. Statistical and Econometric Framework

Methodologically, the GSPC statistical and econometric analysis of possible MWBE public contracting disparities with the City of Chattanooga utilizes a Categorical Regression Model (CRM) framework.⁵⁸ As the covariates measuring public contracting activity/outcomes and other respondent characteristics in Table 33 are categorical responses to questionnaire items (e.g., public contracting bid ranges, yes, no), a CRM views the categories as latent variables with likelihood thresholds that are conditioned on other covariates. In the case where there are more than two categories and the succession of categories has a natural ordered ranking, a CRM permits a determination as to how particular covariates condition the likelihood/probability of being in the highest valued category relative to the lower-valued categories. In the case of just two categorical but not naturally ordered categories, the CRM reduces to a Binary Regression Model (BRM).⁵⁹

For all the CRM/BRM parameter estimates below, in all specifications, GSPC reports them as “odds ratios”, which measure the ratio of the probability of success and the probability of failure relative to the omitted group—Non-MWBE owned firms.⁶⁰ When the odds ratio is greater (less) than unity for a parameter, the measure characteristic has the effect of increasing (decreasing) the likelihood of the outcome under consideration relative to Non-MWBE owned firms. GSPC determines statistical significance on the basis of the estimated coefficient’s probability value—or P-value. The P-value is the probability of obtaining an estimate of the coefficient by chance alone, assuming that the null hypothesis of the variable having a zero effect is true. As a convention, GSPC rejects the null hypothesis of no effect, and concludes the estimated coefficient is statistically significant as long as P-value $\leq .10$, which is highlighted in bold for all parameter estimates.

As nonresponse probabilities in the GSPC survey are unknown, all parameters from other CRM/BRM

⁵⁸ See: Richard D. McKelvey and William Zavoina. 1975. “A Statistical Model for the Analysis of Ordinal Level Dependent Variables,” *Journal of Mathematical Sociology*, 4: pp. 103 - 120.

⁵⁹ More formally, if the latent realization of an outcome is Y_i^* , ranging from $-\infty$ to ∞ , a structural and conditional specification for Y_i^* is $Y_i^* = \mathbf{x}_i \beta + \varepsilon_i$, where \mathbf{x} is a vector of exogenous covariates, β is a vector of coefficients measuring the effects of particular covariates on the realization of Y_i^* , and ε_i is a random error. For categorical and ordinal outcomes $m = 1 \dots J$, $Y_i = m$ if $\tau_{m-1} \leq Y_i^* < \tau_m$, where the τ_i are thresholds for the particular realizations of $Y_i^* = m$. Conditional on \mathbf{x} the likelihood/probability that Y_i takes on a particular realization is $Pr(Y_i = m | \mathbf{x}) = \Phi(\tau_m - \mathbf{x}\beta) - \Phi(\tau_{m-1} - \mathbf{x}\beta)$, where Φ is the cumulative density function of ε . The GSPC methodology utilizes covariates that control and/or proxy for the education level of the firm owner, the age of the firm, the size of the firm with respect to the number of employees and revenues, firm bonding capacity, and firm financial standing.

⁶⁰ An “odds-ratio” is also a measure of “effect size” in that in addition to the statistical significance of a parameter, the “odds-ratio” provides a measure of a parameter estimate’s “practical magnitude.” For an “odds-ratio” the practical magnitude is the absolute value of 1 minus the “odds-ratio”, measuring the percentage change in the likelihood of observing the dependent outcome.

specifications are estimated with bootstrapped standard errors to minimize/eliminate the bias that can result from the sample being unrepresentative of the population of interest due to nonresponse.⁶¹ To the extent that bootstrapped standard errors enable consistent estimation of parameters given misspecification that could result from the omission of sampling and nonresponse weights, CRM/BRM parameter estimates with bootstrapped standard errors effects can mitigate/eliminate the bias caused by a sample that may not be fully representative of the population of interest.⁶² Standard errors are also clustered on business firm category, as outcomes in particular sectors can be correlated (e.g., not independent), and if not accounted for, would lead to biased parameter estimates.⁶³

1. The Relative New Firm Entry Propensities of Minority Firm Owners in the Chattanooga MSA Market Area

GSPC first examined the effects of MWBE status on a business firm's participation in the private sector as a relatively new business firm in the CTGMSA Market Area. To the extent that MWBEs have a lower likelihood of market entry compared to non-MWBEs, it would suggest that private discrimination against minority owned businesses is sufficiently present to warrant consideration of public sector legal remedies such as affirmative action and minority set-aside contracting, that would improve the prospects for the entry of new minority owned firms into the market. Such a perspective on discrimination suggests that entry barriers impede the formation of minority owned firms. The counterfactual is that in the absence of such entry barriers, manifested perhaps as discrimination against minority owned firms in access to capital, credit, etc, MWBEs would be able to enter the market and compete with non-MWBES in bidding and securing public contracts from the City of Chattanooga.

To determine if MWBE status is a barrier to the formation of new businesses in the CTGMSA Market Area, Tables 62 - 67 report, for each of the distinct MWBEs in the GSPC sample, the estimated parameters of a Logit BRM with a binary variable for a firm establishing itself between the years 2013 – 2018 as the dependent variable. As standard control covariates, GSPC includes measures of, or proxies for, the firm's owner's experience, the size of the firm, firm gross revenue, firm bonding status, firm financial standing, whether or not the firm is in the Construction/construction services sector, and the education of the firm owner. As a goodness-of-fit measure, Pseudo- R^2 is reported.⁶⁴

The parameter estimates in Tables 62 – 67 suggest that only MWBES owned by Asian Americans are more likely to be new firms, as the estimated odds ratio is less than unity and statistically significant in those instances. As the excluded group is non-MWBEs, to the extent that market experience is an important determinant of and correlated with success in bidding and securing public contracts, most MWBES in the

⁶¹ See: Bradley Efron and Robert J. Tibshirani. 1993. *An Introduction to the Bootstrap*, Chapman and Hall, NY.

⁶² See: Silvia Goncalves and Halbert White. 2005. "Bootstrap Standard Error Estimates For Linear Regression," *Journal of the American Statistical Association*, 100: pp. 970 -979., and Stanislav Kolenikov. 2010. "Resampling Variance Estimation for Complex Survey Data," *Stata Journal*, 10: pp. 165 – 199.

⁶³ The business categories are: 1.) Construction Services, 2.) Construction Related Professional Services (Including Architecture and Engineering), 3.) Professional Services, 4.) Other Services, and 5.) Goods.

⁶⁴ Pseudo- R^2 is not to be interpreted as the R^2 in standard Ordinary Least Squares (OLS) estimation, as OLS proceeds by minimizing variance to get parameter estimates. Logit specifications are likelihood-based, and higher values of Pseudo- R^2 indicate that the specified model is an increasingly better alternative to a null model with only an intercept.

CTGMSA Market Area are no different than non-MWBES in being recent entrants to the market. This suggests that, with the exception of new firms owned by Asian Americans, the market experience of minority and Non-MWBE owned firms is similar. To the extent that this implies similar knowledge/experience about bidding and securing public contracts, any disparities in public contracting outcomes between MWBEs and non-MWBEs—with the exception of Asian American MWBEs—cannot be explained by differential market experience.

Table 62: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and African American New Firm Entry
 CTGMSA Market Area
 City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market within last 5 years (Binary)			
<i>Regressors:</i>			
Constant	.2632	.1318	.0085
Owner Has More Than 20 Years of Experience	.2535	.1174	.0038
Firm Has More Than 10 Employees	1.29	.8149	.6774
Firm Owner has a Baccalaureate Degree	1.14	.5138	.7732
Gross Revenue at Least \$1,500,000	.3064	.1968	.0665
Single Project Bonding Limit at Least \$1,500,00	1.02	.7877	.9836
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.05	1.63	.3673
Firm is in the Construction Sector	.9790	.6586	.9753
Firm is Certified As An African American Owned Business Enterprise	.9679	.5369	.9538
Number of Observations	221		
<i>Pseudo-R²</i>	.102		

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Table 63: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and Asian American New Firm Entry
 CTGMSA Market Area
 City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market within last 5 years (Binary)			
<i>Regressors:</i>			
Constant	.2653	.1325	.0084
Owner Has More Than 20 Years of Experience	.2515	.1161	.0034
Firm Has More Than 10 Employees	1.24	.7485	.7168
Firm Owner has a Baccalaureate Degree	1.18	.5373	.7118
Gross Revenue at Least \$1,500,000	.3109	.1928	.0615
Single Project Bonding Limit at Least \$1,500,000	1.04	.8093	.9568
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.88	1.47	.4213
Firm is in the Construction Sector	.8991	.5939	.8721
Firm is Certified As An Asian Owned Business Enterprise	2.56	2.26	.2882
Number of Observations	221		
<i>Pseudo-R²</i>	.104		

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*Table 64: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and Hispanic American New Firm Entry
CTGMSA Market Area
City of Chattanooga Disparity Study*

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market within last 5 years (Binary)			
<i>Regressors:</i>			
Constant	.2626	.1325	.0084
Owner Has More Than 20 Years of Experience	.2567	.1176	.0038
Firm Has More Than 10 Employees	1.29	.7746	.6735
Firm Owner has a Baccalaureate Degree	1.13	.5059	.7872
Gross Revenue at Least \$1,500,000	.3118	.1936	.0614
Single Project Bonding Limit at Least \$1,500,00	1.06	.8162	.9417
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.02	1.57	.3692
Firm is in the Construction Sector	1.01	.6688	.9927
Firm is Certified As A Hispanic Owned Business Enterprise	.0012	.0001	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.103		

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Table 65: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and Native American-Owned Firm Entry
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market within last 5 years (Binary)			
<i>Regressors:</i>			
Constant	.2656	.1321	.0084
Owner Has More Than 20 Years of Experience	.2561	.1176	.0031
Firm Has More Than 10 Employees	1.32	.7964	.6451
Firm Owner has a Baccalaureate Degree	1.14	.5122	.7768
Gross Revenue at Least \$1,500,000	.3010	.1878	.0542
Single Project Bonding Limit at Least \$1,500,000	.9977	.7719	.9986
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.98	1.55	.3815
Firm is in the Construction Sector	.9738	.6446	.9682
Firm is Certified As A Native American Owned Business Enterprise	.0051	.0001	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.107		

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Table 66: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and Other Race-New Firm Entry
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market within last 5 years (Binary)			
<i>Regressors:</i>			
Constant	.2628	.1301	.0074
Owner Has More Than 20 Years of Experience	.2537	.1177	.0037
Firm Has More Than 10 Employees	1.29	.8039	.6815
Firm Owner has a Baccalaureate Degree	1.14	.5121	.7693
Gross Revenue at Least \$1,500,000	.3071	.1924	.0619
Single Project Bonding Limit at Least \$1,500,000	1.01	.7634	.9863
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.03	1.61	.3718
Firm is in the Construction Sector	.9822	.6632	.9793
Firm is Certified As An Other Race Owned Business Enterprise	.9944	.4348	.9917
Number of Observations	221		
<i>Pseudo-R²</i>	.102		

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Table 67: Logit Parameter Estimates (Odds Ratio) Business Enterprise Ownership Status and Caucasian Female-Owned Firm Entry
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Entered Market Between 2013-2017 (Binary)			
<i>Regressors:</i>			
Constant	.2321	.1354	.0063
Owner Has More Than 20 Years of Experience	.1942	.0329	.0001
Firm Has More Than 10 Employees	1.15	.9921	.7513
Firm Owner has a Baccalaureate Degree	1.11	.5491	.6514
Gross Revenue at Least \$1,500,000	.7127	.1268	.0587
Single Project Bonding Limit at Least \$1,500,000	1.32	.5138	.7824
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.94	1.21	.2924
Firm is in the Construction Sector	.9318	.6792	.8962
Firm is Certified As A Female Owned Business Enterprise	.9813	.3216	.9741
Number of Observations	221		
<i>Pseudo-R</i> ²	.105		

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2. MWBEs and Bank Loan Denials in The Chattanooga MSA Market Area

To the extent that MWBEs are credit-constrained as a result of facing discrimination in private lending markets, their capacity to compete and execute public project could be compromised. In this context, a political jurisdiction that awards public contracts is potentially a *passive participant* in discrimination, as MWBEs may have recourse only to higher cost financing due to facing discrimination in private credit markets, which compromises the competitiveness of their bids. Such a perspective on discrimination suggests that barriers faced by MWBEs in the private sector can rationalize targeted public contracting programs by political jurisdictions, and the capacity and growth of MWBEs could be enhanced with access to public contracting opportunities (Bates, 2009).⁶⁵

To determine if MWBE status is a barrier to the formation to securing financing and credit in the CTGMSA Market Area, Tables 68 - 73 report, for each of the distinct MWBEs in the GSPC sample, the estimated parameters of an Ordinal Logit BRM with the dependent variable being a categorical variable for the number of times the firm was denied a private bank loan firm between the years 2013 – 2018. The estimated odds ratios reveal that for the five (5) distinct MWBEs in the GSPC sample, relative to non-MWBEs—the excluded group in the CRM specification— African American, Other race, and Females MWBEs are more likely to be denied loans in the private credit market. This suggests that among MWBEs in the CTGMSA Market Area, those firms owned by African Americans, Other Race, and Females are most likely to be constrained in their capacity to compete in the market for public procurement, as a result of private sector credit market discrimination. For MWBEs other than those owned by African Americans, Other Race, and Females, the insignificance of MWBE status suggests that their capacity to compete relative to non-MWBEs with respect to creditworthiness is identical, and cannot explain any disparities they may have with respect to non-MWBEs.

⁶⁵ See: Bates, Timothy. 2009 "Utilizing Affirmative Action in Public Sector Procurement as a Local Economic Development Strategy." *Economic Development Quarterly*, 23: pp. 180 - 192., and Bates, Timothy, and Alicia Robb. 2013. "Greater Access to Capital is Needed to Unleash the Local Economic Development Potential of Minority-owned Businesses." *Economic Development Quarterly*, 27: pp.250 - 259.

Table 68: Ordinal Logit Parameter Estimates (Odds Ratio) African American Ownership Status and Number of Bank Loan Denials
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.39	.4284	.2783
Firm Has More Than 10 Employees	8.92	5.47	.0001
Firm Owner has a Baccalaureate Degree	.9519	.2789	.8672
Gross Revenue at Least \$1,500,000	.9649	.3536	.9227
Single Project Bonding Limit at Least \$1,500,000	2.77	1.26	.0253
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	6.87	6.72	.0497
Firm is in the Construction Sector	1.08	.4374	.8473
Firm is Certified As An African American Owned Business Enterprise	1.86	.7104	.1031
Number of Observations	221		
<i>Pseudo-R²</i>	.113		

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Table 69: Ordinal Logit Parameter Estimates (Odds Ratio) Asian Ownership Status and Number of Bank Loan Denials In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.34	.4069	.3327
Firm Has More Than 10 Employees	8.24	4.66	.0001
Firm Owner has a Baccalaureate Degree	.9318	.2709	.8184
Gross Revenue at Least \$1,500,000	.9552	.3563	.9458
Single Project Bonding Limit at Least \$1,500,000	2.98	1.35	.0163
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	11.56	11.07	.0117
Firm is in the Construction Sector	.9339	.3702	.8634
Firm is Certified As An Asian Owned Business Enterprise	.0013	.0001	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.111		

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Table 70: Ordinal Logit Parameter Estimates (Odds Ratio) Hispanic Ownership Status and Number of Bank Loan Denials
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2017			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.38	.4225	.2894
Firm Has More Than 10 Employees	10.44	6.56	.0001
Firm Owner has a Baccalaureate Degree	.8743	.2581	.6493
Gross Revenue at Least \$,500,000	.9513	.3427	.8917
Single Project Bonding Limit at Least \$1,500,00	2.78	1.24	.0231
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	9.64	9.06	.0163
Firm is in the Construction Sector	1.02	.4046	.9594
Firm is Certified As A Hispanic Owned Business Enterprise	.1917	.1775	.0742
Number of Observations	221		
<i>Pseudo-R²</i>	.112		

Griffin & Strong, P.C., 2019

Table 71: Ordinal Logit Parameter Estimates (Odds Ratio) Native American Ownership Status and Number of Bank Loan Denials
In CTGMSA Market Area
Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.32	.4084	.3641
Firm Has More Than 10 Employees	9.91	6.13	.0001
Firm Owner has a Baccalaureate Degree	.9582	.2825	.8853
Gross Revenue at Least \$1,500,000	.9459	.3424	.8786
Single Project Bonding Limit at Least \$1,500,000	2.65	1.22	.0342
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	8.74	8.22	.0215
Firm is in the Construction Sector	.9007	.3891	.8193
Firm is Certified As A Native American Owned Business Enterprise	2.43	2.35	.3615
Number of Observations	221		
<i>Pseudo-R²</i>	.107		

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Table 72: Ordinal Logit Parameter Estimates (Odds Ratio) Other Race Ownership Status and Number of Bank Loan Denials
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.34	.4092	.3327
Firm Has More Than 10 Employees	9.61	5.98	.0001
Firm Owner has a Baccalaureate Degree	.9076	.2630	.7386
Gross Revenue at Least \$1,500,000	.9944	.3654	.9883
Single Project Bonding Limit at Least \$1,500,000	3.03	1.38	.0172
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	9.09	8.65	.0214
Firm is in the Construction Sector	.9929	.4011	.9861
Firm is Certified As An Other Race Owned Business Enterprise	9.61	9.74	.0253
Number of Observations	221		
<i>Pseudo-R²</i>	.114		

Griffin & Strong, P.C., 2019

Table 73: Ordinal Logit Parameter Estimates (Odds Ratio) Caucasian Female Ownership Status and Number of Bank Loan Denials
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of Bank Loan Denials: 2013-2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.45	.4491	.2251
Firm Has More Than 10 Employees	8.86	5.51	.0001
Firm Owner has a Baccalaureate Degree	.8917	.2579	.6925
Gross Revenue at Least \$1,500,000	1.01	.3727	.9673
Single Project Bonding Limit at Least \$1,500,000	2.37	1.08	.0596
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	7.79	7.61	.0362
Firm is in the Construction Sector	1.14	.4606	.7492
Firm is Certified As A Female Owned Business Enterprise	2.60	.8144	.0021
Number of Observations	221		
<i>Pseudo-R²</i>	.131		

Griffin & Strong, P.C., 2019

3. Are Minority Owned Firms Less Likely To Compete for Contracts in The Chattanooga MSA Market Area?

One reason disparities in public contracting outcomes between MWBEs and non-MWBEs could exist is that relative to non-MWBEs, MWBEs are less likely to submit bids for public contracts. To determine if this is the case in the CTGMSA Market Area, Tables 74 – 79 report Ordinal Logit parameter estimates of a CRM with the number of prime contracting bids submitted by a firm to the North Carolina Department of Transportation between 2013 - 2018 as the dependent variable, for each of the distinct MWBEs in the GSPC sample. The parameter estimates in Tables 74 - 79 suggest MWBEs owned by African Americans, Asian Americans, and Females, are more likely, relative to non-MWBEs, to submit prime bids to the City of Chattanooga. For the other MWBEs, with the exception of MWBEs owned by Native Americans, being an MWBE has no statistically significant effect—their bid submissions to the City of Chattanooga are no different from that of non-MWBEs.

To the extent that public contracting success in the City of Chattanooga is proportional to the number of submissions, the parameter estimates in Tables 74 – 79 suggest that with the exception of MWBEs owned by Native Americans, any public contracting disparities in the CTGMSA Market Area between MWBEs and non-MWBEs cannot be explained by differential public bid submission rates to the City of Chattanooga. Indeed, in the case of MWBEs owned by African Americans, Asian Americans, and Females, their relatively high prime bid submission rates would suggest, all things being equal, a higher success rate relative to non-MWBEs in securing public contracts to the extent that public contracting success is proportional to the number of submissions.

Table 74: Ordinal Logit Parameter Estimates (Odds Ratio) African American Ownership Status and Prime Bid Submissions
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted to City of Chattanooga: 2013 - 2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.99	.6019	.0231
Firm Has More Than 10 Employees	7.01	3.08	.0001
Firm Owner has a Baccalaureate Degree	1.09	.3290	.7563
Gross Revenue at Least \$1,500,000	1.49	.5069	.2316
Single Project Bonding Limit at Least \$1,500,000	.7121	.2629	.3582
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.51	1.43	.1063
Firm is in the Construction Sector	1.28	.5433	.5683
Firm is Certified As An African American Owned Business Enterprise	1.77	.4849	.0385
Number of Observations	221		
<i>Pseudo-R²</i>	.089		

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Table 75: Ordinal Logit Parameter Estimates (Odds Ratio) Asian American Ownership Status and Prime Bid Submissions
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted to City of Chattanooga 2013 - 2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.93	.5736	.0273
Firm Has More Than 10 Employees	8.13	3.71	.0001
Firm Owner has a Baccalaureate Degree	1.09	.3257	.7514
Gross Revenue at Least \$1,500,000	1.44	.4867	.2782
Single Project Bonding Limit at Least \$1,500,000	.7418	.2696	.4137
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.63	1.49	.0914
Firm is in the Construction Sector	1.19	.4847	.6759
Firm is Certified As an Asian American Owned Business Enterprise	3.09	2.05	.0883
Number of Observations	221		
<i>Pseudo-R²</i>	.084		

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Table 76: Ordinal Logit Parameter Estimates (Odds Ratio) Hispanic Ownership Status and Prime Bid Submissions
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted to City of Chattanooga: 2013 - 2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.94	.5819	.0285
Firm Has More Than 10 Employees	7.92	3.49	.0001
Firm Owner has a Baccalaureate Degree	1.07	.3189	.8273
Gross Revenue at Least \$1,500,000	1.47	.4966	.2547
Single Project Bonding Limit at Least \$1,500,000	.7227	.2653	.3761
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	3.06	1.72	.0485
Firm is in the Construction Sector	1.19	.4954	.6741
Firm is Certified As A Hispanic Owned Business Enterprise	.3899	.4558	.4214
Number of Observations	221		
<i>Pseudo-R²</i>	.085		

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Table 77: Ordinal Logit Parameter Estimates (Odds Ratio) Native American Ownership Status and Prime Bid Submissions
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted to City of Chattanooga: 2013 - 2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	2.03	.6114	.0194
Firm Has More Than 10 Employees	7.74	3.41	.0001
Firm Owner has a Baccalaureate Degree	1.02	.3084	.9367
Gross Revenue at Least \$1,500,000	1.51	.5182	.2289
Single Project Bonding Limit at Least \$1,500,000	.8936	.3240	.7563
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.82	1.51	.0517
Firm is in the Construction Sector	1.36	.5489	.4432
Firm is Certified As A Native American Owned Business Enterprise	.1341	.1154	.0216
Number of Observations	221		
<i>Pseudo-R²</i>	.090		

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Table 78: Ordinal Logit Parameter Estimates (Odds Ratio) Other Race Ownership Status and Prime Bid Submissions
in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted to City of Chattanooga: 2013 - 2018			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	1.93	.5746	.0274
Firm Has More Than 10 Employees	7.78	3.42	.0001
Firm Owner has a Baccalaureate Degree	1.11	.3313	.7268
Gross Revenue at Least \$1,500,000	1.44	.4876	.2857
Single Project Bonding Limit at Least \$1,500,000	.7432	.2711	.4148
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	2.88	1.55	.0483
Firm is in the Construction Sector	1.16	.4723	.7169
Firm is Certified As An Other Race Owned Business Enterprise	.6007	.1907	.1093
Number of Observations	221		
<i>Pseudo-R²</i>	.084		

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Table 79: Ordinal Logit Parameter Estimates (Odds Ratio) Caucasian Female Ownership Status and Prime Bid Submissions in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Number of:			
Prime Contractor Bids			
Submitted To North Carolina Department of Transportation: 2013 - 2017			
<i>(Categorical)</i>			
<i>Regressors:</i>			
Owner Has More Than 20 Years of Experience	2.09	.6366	.0153
Firm Has More Than 10 Employees	6.89	2.90	.0001
Firm Owner has a Baccalaureate Degree	1.04	.3183	.8902
Gross Revenue at Least \$1,500,000	1.54	.5682	.2457
Single Project Bonding Limit at Least \$1,500,000	.6068	.2458	.2183
Financing Requirements Are a Barrier for Obtaining North Carolina Department of Transportation Projects	2.69	1.41	.0581
Firm is in the Construction Sector	1.33	.5765	.5083
Firm is Certified As A Female Owned Business Enterprise	2.36	.6522	.0024
Number of Observations	221		
<i>Pseudo-R²</i>	.102		

Griffin & Strong, P.C., 2019

4. **Minority Owned Firms And Prime Contracting Experience in the Chattanooga MSA Market Area**

To the extent that frequency of public contract bids reflects past experience as a prime contractor, MWBEs can potentially become frequent prime contract bidders by actually gaining experience as successful prime contractors. As such, the frequency of prime bids by MWBEs firms need not be a concern if they are actually gaining valuable experience as prime contractors that will translate into frequent contract bids and success later. To explore if this is the case in the CTGMSA Market Area, Tables 80 - 85 report Logit BRM parameter estimates where the dependent variable is whether or not a firm never served as a prime contractor for the City of Chattanooga between 2013 – 2018.

The parameter estimates in Tables 80 - 85 suggest that relative to non-MWBEs, MWBEs owned by African Americans and Asian Americans, Native Americans and Females, were more likely to have never served as prime contractors for the City of Chattanooga, as the estimated odds ratio is greater than one and statistically significant in these instances. In general, the estimated odds ratios in Tables 80 – 85 suggest that relative to non-MWBEs, the likelihood of MWBEs owned by African Americans, Hispanic Americans, Native Americans, and Females winning bids for prime contracts with the City of Chattanooga is lower. To the extent that public contract success is proportional to prior experience as a prime contractor, this suggests that any public contracting success disparities between non-MWBEs, and MWBEs owned by African Americans, Asian Americans, Native Americans, and Females may reflect past discriminatory constraints on public contract success if current public contracting success is correlated with the experience gained from past public contracting success in the City of Chattanooga.

Table 80: Logit Parameter Estimates (Odds Ratio) African American Ownership Status and Prime Contracting in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
For City of Chattanooga:			
<i>Regressors:</i>			
Constant	.6360	.2844	.3124
Owner Has More Than 20 Years of Experience	.6613	.2427	.2613
Firm Has More Than 10 Employees	4.41	2.43	.0073
Firm Owner has a Baccalaureate Degree	.7091	.2553	.3412
Gross Revenue at Least \$1,500,000	.7003	.2812	.3759
Single Project Bonding Limit at Least \$1,500,000	7.63	5.97	.0094
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	3.50	4.13	.2882
Firm is in the Construction Sector	1.53	.9810	.5191
Firm is Certified As An African American Owned Business Enterprise	6.62	4.14	.0038
Number of Observations	221		
<i>Pseudo-R²</i>	.148		

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Table 81: Logit Parameter Estimates (Odds Ratio) Asian Ownership Status and Prime Contracting
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.6871	.3113	.4184
Owner Has More Than 20 Years of Experience	.6497	.2321	.2278
Firm Has More Than 10 Employees	5.49	3.01	.0029
Firm Owner has a Baccalaureate Degree	.7079	.2445	.3171
Gross Revenue at Least \$1,500,000	.6833	.2558	.3196
Single Project Bonding Limit at Least \$1,500,00	7.63	5.85	.0083
Financing Requirements	4.50	4.98	.1741
Are a Barrier for Obtaining City of Chattanooga Projects			
Firm is in the Construction Sector	1.28	.8054	.6987
Firm is Certified As An Asian Owned Business Enterprise	2.36	3.54	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.101		

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Table 82: Logit Parameter Estimates (Odds Ratio) Hispanic Ownership Status and Prime Contracting
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.7086	.3189	.4431
Owner Has More Than 20 Years of Experience	.6466	.2324	.2257
Firm Has More Than 10 Employees	5.29	2.88	.0027
Firm Owner has a Baccalaureate Degree	.7094	.2481	.3263
Gross Revenue at Least \$1,500,000	.6897	.2587	.3238
Single Project Bonding Limit at Least \$1,500,000	7.66	5.88	.0084
Financing Requirements	5.77	6.55	.1238
Are a Barrier for Obtaining City of Chattanooga Projects			
Firm is in the Construction Sector	1.26	.8038	.7218
Firm is Certified As A Hispanic Owned Business Enterprise	.9896	1.27	.9941
Number of Observations	221		
<i>Pseudo-R²</i>	.099		

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Table 83: Logit Parameter Estimates (Odds Ratio) Native American Ownership Status and Prime Contracting In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.7087	.3191	.4442
Owner Has More Than 20 Years of Experience	.6415	.2288	.2135
Firm Has More Than 10 Employees	5.29	2.88	.0027
Firm Owner has a Baccalaureate Degree	.7229	.2517	.3512
Gross Revenue at Least \$1,500,000	.6893	.2568	.3182
Single Project Bonding Limit at Least \$1,500,000	6.68	5.10	.0138
Financing Requirements	5.81	6.56	.1193
Are a Barrier for Obtaining City of Chattanooga Projects			
Firm is in the Construction Sector	1.20	.7819	.7758
Firm is Certified As A Native American Owned Business Enterprise	1.38	1.43	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.101		

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Table 84: Logit Parameter Estimates (Odds Ratio) Other Race Ownership Status and Prime Contracting
In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.7084	.3189	.4316
Owner Has More Than 20 Years of Experience	.6472	.2312	.2237
Firm Has More Than 10 Employees	5.30	2.88	.0023
Firm Owner has a Baccalaureate Degree	.7109	.2461	.3241
Gross Revenue at Least \$1,500,000	.6879	.2587	.3217
Single Project Bonding Limit at Least \$1,500,000	7.66	5.87	.0084
Financing Requirements	5.76	6.53	.1243
Are a Barrier for Obtaining City of Chattanooga Projects			
Firm is in the Construction Sector	1.25	.8026	.7225
Firm is Certified As An Other Race Owned Business Enterprise	.9151	1.09	.9414
Number of Observations	221		
<i>Pseudo-R²</i>	.099		

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Table 85: Logit Parameter Estimates (Odds Ratio) Caucasian Female Ownership Status and Prime Contracting In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Prime Contractor for City of Chattanooga: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.5889	.2546	.2214
Owner Has More Than 20 Years of Experience	.6362	.2362	.2237
Firm Has More Than 10 Employees	4.64	2.46	.0043
Firm Owner has a Baccalaureate Degree	.6854	.2402	.2816
Gross Revenue at Least \$1,500,000	.7419	.2862	.4391
Single Project Bonding Limit at Least \$1,500,000	6.63	5.23	.0175
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	5.08	5.44	.1291
Firm is in the Construction Sector	1.44	.9074	.5658
Firm is Certified As A Female Owned Business Enterprise	2.66	.9842	.0084
Number of Observations	221		
<i>Pseudo-R²</i>	.128		

Griffin & Strong, P.C., 2019

5. **Minority Owned Firms And Sub-Contracting Experience in the Chattanooga MSA Market Area**

MWBEs can potentially become frequent prime contract bidders by actually gaining experience as successful subcontractors on City of Chattanooga projects. As such, the frequency of prime contract bids by MWBEs need not be a concern if they are actually gaining valuable experience as subcontractors that will translate into frequent contract bids and success later as prime contractors on City of Chattanooga projects. To explore if MWBEs are gaining experience as sub-contractors in the CTGMSA Market Area, Tables 86 - 91 report Logit BRM parameter estimates where the dependent variable is whether or not a firm never served as a sub-contractor for the City of Chattanooga between 2013 – 2018.

The parameter estimates in Tables 86 – 91 suggest that relative to non-MWBEs, MWBEs owned by African Americans, Native Americans, Other race, and Females, were more likely to have never served as subcontractors on City of Chattanooga projects, as the estimated odds ratio is greater than one (1) and statistically significant in these instances. In general, the estimated odds ratios in Tables 86 – 91 suggest that relative to non-MWBEs, the likelihood of MWBEs owned by African Americans, Native Americans, Other race, and Females serving as subcontractor on City of Chattanooga project is lower. To the extent that public contract success is proportional to prior experience as a subcontractor, this suggests that any public contracting success disparities between non-MWBEs, and MWBEs owned by African Americans, Native Americans, Other race, and Females may reflect past discriminatory constraints they faced as sub-contractors if current public contracting success is correlated with the experience gained as subcontractors on City of Chattanooga projects.

Table 86: Logit Parameter Estimates (Odds Ratio) African American Ownership Status and Sub-Contracting In CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4349	.1926	.0613
Owner Has More Than 20 Years of Experience	.8402	.3348	.6621
Firm Has More Than 10 Employees	4.78	2.69	.0064
Firm Owner has a Baccalaureate Degree	1.78	.7362	.1641
Gross Revenue at Least \$21500,000	.7115	.3067	.4313
Single Project Bonding Limit at Least \$1,500,000	19.17	23.56	.0161
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.11	.6336	.0001
Firm is in the Construction Sector	.5676	.4068	.4295
Firm is Certified As An African American Owned Business Enterprise	5.21	3.48	.0132
Number of Observations	221		
<i>Pseudo-R²</i>	.190		

Griffin & Strong, P.C., 2019

*Table 87: Logit Parameter Estimates (Odds Ratio) Asian Ownership Status and Sub-Contracting
In CTGMSA Market Area
City of Chattanooga Disparity Study*

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4868	.2210	.1136
Owner Has More Than 20 Years of Experience	.7936	.3071	.5514
Firm Has More Than 10 Employees	5.91	3.31	.1873
Firm Owner has a Baccalaureate Degree	1.67	.6436	.3171
Gross Revenue at Least \$1,500,000	.6727	.2739	.3314
Single Project Bonding Limit at Least \$1,500,00	19.36	23.19	.0138
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.12	5.63	.0001
Firm is in the Construction Sector	.5134	.3335	.3157
Firm is Certified As An Asian Owned Business Enterprise	3.67	4.24	.2592
Number of Observations	221		
<i>Pseudo-R²</i>	.154		

Griffin & Strong, P.C., 2019

Table 88: Logit Parameter Estimates (Odds Ratio) Hispanic Ownership Status and Sub-Contracting
in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4868	.2210	.1134
Owner Has More Than 20 Years of Experience	.7935	.3087	.5524
Firm Has More Than 10 Employees	5.91	3.31	.0027
Firm Owner has a Baccalaureate Degree	1.66	.6476	.1913
Gross Revenue at Least \$1,500,000	.6227	.2741	.33314
Single Project Bonding Limit at Least \$1,500,000	19.36	23.26	.0142
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.64	8.27	.0001
Firm is in the Construction Sector	.5134	.3335	.3153
Firm is Certified As A Hispanic Owned Business Enterprise	1.01	1.33	.9971
Number of Observations	221		
<i>Pseudo-R²</i>	.154		

Griffin & Strong, P.C., 2019

Table 89: Logit Parameter Estimates (Odds Ratio) Native American Ownership Status and Sub-Contracting in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4874	.2215	.1142
Owner Has More Than 20 Years of Experience	.7858	.3013	.5314
Firm Has More Than 10 Employees	5.93	3.31	.0021
Firm Owner has a Baccalaureate Degree	1.69	.6464	.1713
Gross Revenue at Least \$1,500,000	.6725	.2723	.3271
Single Project Bonding Limit at Least \$1,500,000	15.22	17.45	.0185
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	6.08	2.95	.0001
Firm is in the Construction Sector	.4956	.3165	.2726
Firm is Certified As a Native American Owned Business Enterprise	7.11	7.82	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.154		

Griffin & Strong, P.C., 2019

Table 90: Logit Parameter Estimates (Odds Ratio) Other Race Ownership Status and Sub-Contracting
in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4883	.2219	.1153
Owner Has More Than 20 Years of Experience	.7884	.3062	.5412
Firm Has More Than 10 Employees	5.77	3.24	.0021
Firm Owner has a Baccalaureate Degree	1.63	.6313	.2194
Gross Revenue at Least \$2,500,001	.6945	.2831	.3716
Single Project Bonding Limit at Least \$500,001	19.23	22.94	.0131
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	1.66	.8303	.0001
Firm is in the Construction Sector	.5241	.3394	.3193
Firm is Certified As An Other Race Owned Business Enterprise	7.83	4.95	.0001
Number of Observations	221		
<i>Pseudo-R²</i>	.160		

Griffin & Strong, P.C., 2019

Table 91: Logit Parameter Estimates (Odds Ratio) Caucasian Female Ownership Status and Sub-Contracting in CTGMSA Market Area
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Never Been a Sub-Contractor for City of Chattanooga Project: 2013 – 2018 (Binary)			
<i>Regressors:</i>			
Constant	.4053	.1739	.0353
Owner Has More Than 20 Years of Experience	.7569	.3062	.4918
Firm Has More Than 10 Employees	5.04	2.76	.0031
Firm Owner has a Baccalaureate Degree	1.65	.6486	.2147
Gross Revenue at Least \$1,500,000	.7343	.3157	.4723
Single Project Bonding Limit at Least \$1,500,000	16.75	20.72	.0238
Financing Requirements Are a Barrier for Obtaining City of Chattanooga Projects	6.23	2.98	.0001
Firm is in the Construction Sector	.5794	.3734	.3974
Firm is Certified As A Female Owned Business Enterprise	3.02	1.25	.0072
Number of Observations	221		
<i>Pseudo-R²</i>	.187		

Griffin & Strong, P.C., 2019

D. Conclusion

GSPC’s analysis of disparities in public contracting and subcontracting outcomes in the City of Chattanooga aimed to provide some policy relevant insight to observed unconditional disparity indexes. A descriptive private sector analysis of the CTGMSA Market Area private sector revealed that, in general, being an MWBE in the CTGMSA Market Area is associated with lower firm revenue, and is less likely to be self-employed,

which lends some support to the “but-for” justification for affirmative action in public procurement. Lower revenues for MWBEs in the CTGMSA Market Area are suggestive of private sector discrimination that undermines their capacity to compete with non-MWBEs for public contracting opportunities. GSPC’s descriptive analysis of the private and construction sectors in the CTGMSA based upon aggregate ACS data in the tables above were suggestive of, but not necessarily causal evidence for, MWBEs owned by African Americans and Females facing discriminatory barriers in the private and construction sectors of the CTGMSA.

As the GSPC survey provides a more detailed disaggregation of firm by MWBE types, Table 92 provides insight on which particular MWBEs in the broad CTGMSA Market Area are possibly constrained by private sector discrimination that translates into lower revenue relative to non-MWBEs. The Ordinal Logit parameter estimates from the GSPC sample suggest that MWBEs owned by African Americans and Females are particularly affected by private sector discrimination that results in lower firm revenue as the odds ratio is significant and less than parity relative to firms owned by non-MWBEs.

Table 92: Firm Revenue and MWBE Status in the CTGMSA Market Area
Ordinal Logit Parameter Odds Ratio Estimates
City of Chattanooga Disparity Study

	Coefficient	Standard Error	P-value
<i>Regressand:</i> Firm Revenue (Categorical)			
<i>Regressors:</i>			
Owner Has More Than 20 years of Experience	2.09	.5668	.0063
Firm Has More Than 10 Employees	21.49	12.07	.0000
Firm Owner has A Baccalaureate Degree	1.45	.3933	.1712
Single Project Bonding Limit at Least \$1,500, 000	6.31	2.88	.0001
Financing Requirements are a Barrier for Obtaining North Carolina Department of Transportation Projects	.4776	.1922	.0664
Firm is in the Construction Sector	3.89	1.57	.0013
Firm is Certified as an African American Owned Business Enterprise	.4532	.1491	.0167
Firm is Certified as an Asian American Owned Business Enterprise	11.54	4.85	.0001
Firm is Certified as a Hispanic American Owned Business Enterprise	1.37	.9071	.6372
Firm is Certified as a Native American Owned Business Enterprise	1.03	.8243	.9758
Firm is Certified as an Other Race Owned Business Enterprise	.1989	.2229	.1513
Firm is Certified as Female Owned Business Enterprise	.5727	.1618	.0491
Number of Observations	221		
<i>Pseudo-R²</i>	.136		

Griffin & Strong, P.C., 2019

Overall, the GSPC disparity analysis explicitly links a business firm’s MWBE status to public contracting outcomes in the CTGMSA Market Area. Parameter estimates from categorical regression models suggest that, in general, being an MWBE owned by Native Americans and Other Race reduces the likelihood of

being a new entrant to the CTMSGGA market area. This suggests that for these MWBEs, there is no market experience differential between them and non-MWBEs that could explain relative public contracting success outcomes. Indeed, the effects of MWBE status on market entry is either statistically insignificant, or with a significant odds ratio greater than parity, suggesting that, lower market experience of MWBE's compared to non-MWBEs cannot explain any public contracting success disparities in the City of Chattanooga.

Another finding is that in the CTGMSA Market Area, with the exception of MWBEs owned by Other Race and Females, the credit capacity of MWBEs, as measured by the likelihood of being denied a bank loan, does not appear to be any different from non-MWBEs. This suggests that any public contracting disparities between MWBEs and non-MWBEs in the CTGMSA Market Area cannot be explained by differential credit capacities.

The results of the GSPC disparity analysis provide a framework to rationalize observed disparities in public contracting outcomes/success with the City of Chattanooga between MWBEs and non-MWBEs in the CTGMSA Market Area. The results suggest that there are disparities in public contracting outcomes. Compared to non-MWBEs, the likelihood of MWBEs owned by African Americans, Asian Americans, and Native Americans not having won bids for prime contracts with the City of Chattanooga is lower. This analysis suggests that any disparities which exist cannot be explained by differential MWBE/non-MWBE prime contract submissions, but can possibly be explained, at least in part, by MWBEs being less likely to have served as prime contractors and subcontractors in the past. The regression model controls and/or proxies for the education level of the firm owner, the age and market tenure of the firm, the size of the firm with respect to the number of employees and revenues, firm bonding capacity, and firm financial standing; none of these factors is driving the disparities between MWBEs and non-MWBEs in the likelihood of winning prime contracts with the City of Chattanooga. In this context, GSPC's results are also consistent with disparities in winning prime contracts from the City of Chattanooga being driven by discrimination against MWBEs.

Lastly, the results of the GSPC disparity analysis suggest that any observed disparities in public contracting outcomes between MWBEs and non-MWBEs are not explained by differential capacities for public contracting with the City of Chattanooga. The regression specifications control for firm public contracting capacity by including measures for the education level of the firm owner, the age and market tenure of the firm, the size of the firm with respect to the number of employees and revenues, firm bonding capacity, and firm financial standing. This inclusion of these control covariates in the regression specifications permit an assessment of public contracting success/failure conditional on MWBE and non-MWBE public contracting capacity. The existence of public contracting success disparities between MWBEs and non-MWBEs even after controlling for capacity suggests that relative to non-MWBEs, MWBEs face barriers independent of their capacity—or their ability—in securing public contracts with the City of Chattanooga.

VII. ANECDOTAL EVIDENCE ANALYSIS

A. Introduction

This chapter of the Study addresses qualitative evidence collected from citizens of the City of Chattanooga (the “City”) and participants in its wider marketplace. Over the span of several months, GSPC collected testimony from public hearings, organization interviews, outreach meetings, web surveys, and email commentary on the topic of contracting with the City of Chattanooga. This broad outreach was the result of an effort to inform as many business owners and stakeholders as was feasible regarding the existence of the Study and the aims of the Study team, and to gather narratives regarding business ownership in Chattanooga from a diverse field of participants. Designed to gather both qualitative and quantitative feedback, the survey of business owners reached out to 2,909 businesses and heard back from 208 businesses. The survey data provides useful attitudinal and demographic information that will be analyzed alongside the individual and group representative commentary herein.

In addition to an informational meeting to introduce the public to both the context and purpose of the Study, public hearings were held on April 16, 2019 at the Olivet Baptist Church Kingdom Center and advertised widely to stakeholders and the public at large. All were invited to provide recorded testimony on the topic of business ownership in Chattanooga and contracting with the City. In addition, a focus group was held on April 16, 2019 consisting of thirteen (13) business owners of various backgrounds and work categories and was intended to provide a discursive space for the discussion of topics related to public contracting in Chattanooga. Organization meetings were held with various groups representing diverse membership, in which representatives who boast regular contact with business owners from various trade, ethnic, and gender identifications were able to provide their individual perspectives alongside the insight that they had gathered from their constituencies. Finally, email comments were accepted and encouraged throughout the Study to the discrete email address, ChattanoogaStudy@gspclaw.com, which is managed by GSPC.

B. Organization Meetings

The Study team met with several groups and organizations serving business owners in the Chattanooga area to discuss the impressions of their various constituencies regarding contracting with the City of Chattanooga, and their perspectives on areas for possible improvement of diverse business engagement. These meetings included an organization that engages the local Hispanic American business community, two (2) organizations geared toward assisting African American businesses in Chattanooga, an organization serving general contractors in construction, the City’s compliance department, one (1) organization that assists small for-profit firms in East Tennessee, and a startup incubator for entrepreneurs in the city. The organizations provide a range of services including operations and business development assistance, one-on-one consultations for marketing and loan assistance, educational seminars, legal advocacy and interface with public officials, and workforce development training. The City’s Compliance Office provides mediation and assistance with bid protest to business owners and deals with complaints regarding the contracting process. A full list of external organizations contacted for the study is included in Appendix J.

1. Market Impressions

Organizations provided the Study team with their impressions of both the general market for business owners in Chattanooga and contracting with the City of Chattanooga in particular. While several groups noted that the City of Chattanooga has “made great strides” in supporting entrepreneurs (Org-2), “is a great place for business development” (Org-5), and an “excellent place to start a business” (Org-3) they also noted that improvements may be made, specifically in the City’s focus on minority and Females owned businesses. While a representative from Org-3 (which focuses on providing services to startup firms) finds that the costs of starting a business in Chattanooga are lower than average, which is helpful in fostering entrepreneurship. He also notes that minority businesses have difficulty accessing capital and lack the resources of an established African American middle class as both a consumer base and a source of such capital. He (Org-3) believes, however, that Chattanooga, due to its small size, can be a “laboratory” for capital assistance policies, and will likely be able to implement them in a shorter span of time. Org-4, representing a group of general construction contractors, believes that her members have decently favorable impressions of the City of Chattanooga, and that the City is “pro-economic development,” but the inefficiencies and fees associated with getting projects completed may have a disproportionate impact on minority and Females-owned businesses that seek to do business with the City. Org-7 notes an issue with getting businesses certified in certain trades and as DBEs, due to the paperwork involved, but says that without these certifications, firms cannot “get involved in bigger contracts.”

While Org-1, which represents and serves Hispanic American business owners, feels that the environment is “generally positive” for minorities, but that all firms could benefit from being educated about each other’s existence to facilitate partnerships and opportunities. Org-6, the leader of an organization serving African Americans, believes that city officials are sometimes “disingenuous” about diversity in contracting and developing African American owned businesses specifically, not just minority firms in general. The organization leader of Org-6 does not believe that the City wants to make public the “low numbers” of contracts going to African American owned businesses, pointing to the fact that the minority business statistics which are made publicly available are not broken out according to race.

When asked whether the City makes diversity a priority, organization representatives by and large felt that the City does care about diversity and inclusion. However, some felt that City officials are unaware of how to develop minority businesses (Org-4) and primarily support minorities in “superficial ways” such as festivals and events (Org-1). While Org-3 finds the Mayor and other City officials to be “very genuine” in their desire to address low minority participation, a representative from Org-6 said she felt that the City would be in the “bottom 1 percent” of cities when it comes to diversity. A representative from the Compliance Office within the City felt that the City would get a “B” for contracting and diversity, noting the laws in place to address discrimination but feeling that it is up to minority firms to “take action” and report bad behavior.

However, their personal impressions of contracting with the City and the City’s attitudes aside, these representatives and leaders of groups and organizations in Chattanooga noted that the communities they serve often feel differently. The Compliance Office employee felt that there are complaints in Chattanooga

of discriminatory practices, even if they do not always make their way formally to their offices. Two (2) groups classed their constituencies (one (1) serving all groups, and another one (1) specifically serving African Americans) as “frustrated” (Org-5, Org-6) with the state of contracting in the City and the opportunities for minority and Females owned businesses. Their groups would like to see more of a focus on minority communities in the City, and a greater effort to include their organizations in decision-making. While Org-1 stated flatly that the City does not give enough attention to diverse contracting, Org-2, who represents a group of African American entrepreneurs and professionals, said that those who have won contracts with the City are supportive of its efforts, and those who feel they have been left out of the contracting process have a more negative view. He (Org-2) believes that the City can improve its responsiveness, especially when contractors lose bids, and could stand to increase its outreach to diverse firms. Placing part of the blame on the lack of focus in Chattanooga’s private sector on inclusion, he felt that the City has tried to set an example but is too small a “percentage of the pie” to be truly meaningful for such businesses on its own.

2. Barriers and Discrimination

As previously noted, the representative from the City’s Compliance Office sometimes hears about instances of discrimination in Chattanooga outside of her official capacity but has received no notices of official complaints related to racial discrimination. Though she is aware that the Office of Cultural Affairs received some complaints, she does not know why they have not recached her office if they pertained to contracting. When asked about discrimination and barriers to minority businesses in Chattanooga or in doing business with the City of Chattanooga, responses were mixed. (Org-?), a contracting organization targeting Hispanic American business owners, posited the lack of financial support as a major barrier, and, echoing the complaints of Org-6, a homogenous focus on minorities that “puts them all in the same bucket” rather than recognizing the diversity of cultures particularly within the Hispanic community and the different issues that must be addressed with each.

Lack of workforce development among minority groups was cited as a potential issue for businesses (Org-3, Org-7) as well as a lack of networks and social capital among minorities to break into the market (Org-2). While the general contracting group only has one (1) minority member, their representative stated that they are interested in recruiting more, noting that the City has not necessarily focused on developing in minority areas, choosing to focus more on the rapidly gentrifying “hot” areas in town, and that this has had an adverse effect on minority business engagement and development (Org-4). Org-7 also observes this, saying that he doubts “any people of color were at the table” when the new developments were being conceived, though such exclusion may not have been intentional. Still, he feels that Chattanooga has work to do. “When you go in the business district in Atlanta, it’s a different feel, a different vibe. The powers that be need to see and understand how diversity can impact the local economy” (Org-7).

3. Opportunities for Improvement

In terms of suggestions for ways in which the City may improve its growth of and engagement with minority owned and Females owned businesses in the area, the organization leaders were not short of ideas. For instance, both the general contractors’ group representative and the representative from a group serving

African American contractors specifically cited a need for more diverse staff in purchasing and at the City, with the contractor organization specifically indicating that the City may benefit from replicating certain programs implemented in Memphis to place “checks and balances” on the procurement process. Org-2 feels that a specific staff position for diversity and compliance with “culturally competent” staff would be helpful, requesting that such a position not be made a part of the Office of Multicultural Affairs. Org-1 suggested a different structure, feeling that OMA should have a staff member focused on business development.

Org-5 feels that funding opportunities for the growth and scaling of minority and Females -owned businesses would assist in local growth, and that investment in business education with a focus on technology will be key. Org-3, moving down the same path, would like to see the City assist in network-building, financing, mentoring, and the other requirements for business growth for small and minority-owned firms. In addition, for projects at the quote level, Org-2 would like to see at least one minority or Females-owned business allowed to provide a quote on each project. Org-6 requested that the African American business community in Chattanooga receive “33.3 percent” of all contracts let, stating that there are enough businesses in the community for that to be a reasonable number. This Study will determine the number of available firms and an appropriate percentage based on contracting statistics that may be legally applied to eligible contracts.

C. Survey of Business Owners

The Study survey includes responses from 208 business owners to a variety of demographic, financial, and anecdotal questions regarding their experiences doing business in Chattanooga and with the City of Chattanooga. The survey was conducted online, and the full response tables referred to in this section may be found in Appendix I. Of the 208 respondents, 52 were Non-MWBE, 79 were Caucasian Female, 58 were African American, 3 were Asian American, 9 were Hispanic American, 4 were Native American, and 3 identified as Bi-/Multi-Racial or “Other.” Minority Females responded at rates fairly equal to their male counterparts in each group. Firms included, across demographic categories: 28 construction firms, 12 A&E firms, 68 Professional Services firms, 59 firms providing “Other Services,” and 41 firms supplying goods. The survey tables referenced in this chapter may be viewed in Appendix I.

The majority of businesses that responded have been in business for more than 20 years, and this was consistent across demographic categories. In addition, 57 percent identified as small businesses (less than 10 employees), also across ethnic and gender categorizations (Survey Table 4) . The majority of respondents from all demographics never bid or contracted on a City project during the Study period (Survey Tables 29-30). When presented with a list of potential reasons for lack of performance on City projects, the highest percentage of respondents, 25 percent, cited unfair competition (Survey Table 49), 17 percent identified bid specifications (Survey Table 37), and 16 percent cited “limited knowledge” of purchasing and contracting policies at the City (Survey Table 40). Though only 3 percent of Non-MWBE and Caucasian Female owned businesses selected that the contract was “too expensive” to bid (Survey Table 45) or too large (Survey Table 44), 13 percent of African American owned firms thought contracts were too expensive and 11 percent thought they were too large. Thirteen (13) percent of all respondents identified excessive paperwork (Survey Table 33) and the “selection process” as potential barriers (Survey Table 47).

With regard to attitudes toward doing business with the City of Chattanooga, 99.5 percent of respondents claimed that they are willing to contract with the City, but roughly 17 percent were unsure if they are qualified to do so (Survey Tables 12-13). Minority-owned firms were slightly less likely to affirmatively rate their qualifications to do business with the City—13 percent of Non-MWBE business owners and 15 percent of Caucasian Female business owners said that they were unsure, versus nearly 20 percent of African American respondents (Survey Table 13). In addition, 44.5 percent of respondents are not currently registered with the City, despite being willing to do business with Chattanooga and despite higher numbers being registered with other government entities such as Hamilton County, Metro Nashville Government, the State of Tennessee, and the Tennessee Department of Transportation (Survey Tables 14-15). Only 14 percent of respondents were not registered elsewhere. The reasons behind the lack of registration with the City are revealing. These include (Survey Tables 16- 22):

- a) Not knowing there was a registry (52 percent of unregistered respondents)
- b) Not knowing how to register (22 percent)
- c) Not believing they would be awarded a contract (16 percent)
- d) Not seeing opportunities in their field (14 percent)

A higher percentage than average of African American owned businesses selected that there are few opportunities in their field of work (20 percent) and that they believe they would not be awarded a contract if they bid (28 percent). Lower percentages of African American owned businesses selected that they do not know how to register (10 percent) or that they did not know there was a registry (38 percent) than the total respondents or Non-MWBE owned and Caucasian Female owned businesses. However, a majority of African American, Hispanic American, and Females owned businesses were certified as DBEs, and all Native American owned business respondents were certified. Most Asian American owned firms that responded were not certified (Survey Table 52). In selecting reasons for not being certified, the top responses were that they did not understand the certification process (24 percent), did not have the time to get certified (23 percent), or did not understand how it would benefit their firm (23 percent) (Survey Tables 56-62).

African American owned, Hispanic American owned, and Females owned firms reported lower gross revenues than Non-MWBE owned firms, with 40 percent of Caucasian Female owned firms, 44 percent of Hispanic owned firms, and 54 percent of African American owned firms estimating less than \$250,000 in 2018, compared to 60 percent of Non-MWBE owned firms who bring in between \$500,000 and +\$10 million (Survey Table 9). However, collectively, Caucasian Female owned firms and firms owned by minorities reported commensurate educational outcomes and work experience to those reported by Non-MWBE owned firms (Survey Tables 7-8).

When asked a series of questions about potential barriers to doing work with the City of Chattanooga, firm responses revealed that a significant percentage, roughly 48 percent across demographics, believe that there is an “informal network of prime contractors and subcontractors doing business with the City” and monopolizing public contracting. Caucasian Female owned, African American owned, and Native American owned firms had the highest affirmative response to this at 64 percent, 44 percent, and 75 percent respectively (Survey Table 75). 37 percent of Non-MWBE owned firms and Hispanic American owned firm respondents felt similarly. Of those respondents, 51 percent believe that their company’s “exclusion” from this network has prevented them from winning contracts with the City (Survey Table 76). African American

owned, Native American owned, and Hispanic American owned firms “agreed” or “strongly agreed” with the statement that “Double standards in qualifications and work performance make it more difficult for minority and Females owned businesses to win bids or contracts” at a rate of 52 percent, 50 percent, and 38 percent, compared to 33 percent of Asian American business owners, 28 percent of Caucasian Female business owners, and 7 percent of Non-MWBE business owners (Survey Table 77).

When asked about the behavior and attitudes of prime contractors, 33 percent of participants selected that they believe prime contractors will sometimes contact a minority owned firm or Females owned firm to get quotes but will not give the proposal a serious review (Survey Table 79) and 28 percent agreed that a prime contractor will sometimes include minority owned firms and Females owned firms in a bid to meet a goal and then drop them (Table 80). 37 percent felt that MWBE firms are viewed as less competent (Survey Table 81), and 42 percent agreed or strongly agreed that some prime contractors use MWBEs only as required (Survey Table 82). Though fewer Non-MWBE owned firms agreed with the majority of those statements than their minority business owners and Females businessowner peers—between 2 percent and 7 percent—affirmative responses spiked up at the last question, indicating that 17 percent of Non-MWBE respondents agree or strongly agree that MWBEs are utilized only as required by the City.

D. Public Hearings

On April 16, 2019 at the Olivet Baptist Church Kingdom Center, GSPC held a public hearing on behalf of the City of Chattanooga’s Study. All attendees were asked to provide their name for the official record, which was taken by a court reporter. Nine (9) speakers chose to provide testimony regarding the disparity study process on the record, and most were concerned with a holistic view of Chattanooga’s health as a City in which minorities and minority businesses could thrive. Some expressed a frustration with the lack of a more “comprehensive” study that exceeded the legally required bounds of a traditional post-Crosby disparity study to analyze the impact of capital access, education, workforce, and housing inequalities.

PH-4 made clear that she and others had requested such a study and found the Council’s decision to only study contracting with minority owned and Females owned businesses, rather than all of the issues currently facing the minority community in Chattanooga, “disrespectful.” PH-4 said of the community in Chattanooga that “we already know” that there are disparities in contracting but felt that the City was attempting to avoid broader issues, citing certain councilmembers’ unwillingness to accept the results of a “devastating” study on homelessness and failing schools. PH-7 noted the history of attempts to procure a disparity study in Chattanooga, saying that at a previous point the City had commissioned a study, but it was voted against in Council. At that time, he claimed, there were “20 or 30 black construction businesses” working in commercial and residential construction, as well as “ironworkers and plumbers” and they were “put out of businesses by the City’s unwillingness to examine its contracting.

Several participants, one a local official, called on those present to vote and to engage in structured community organizing such as boycotts. “The ballot box is where choices are made,” said PH-6, a representative from Hamilton County. “If elected officials are not putting you first, that’s a wasted vote,” he said. PH-9 echoed this sentiment. Lamenting the perceived lack of community action and the “deplorable

conditions” in the district he represents, PH-6 said that it is difficult to engage youth because they “don’t see a future.” He feels that the degradation of African American communities in Chattanooga was “on purpose.” He was not the only person to claim intentionality on behalf of the City in neglect, displacement, and gentrification. PH-3, a citizen and business owner, stated that the “privatization at the expense of the African American community” was supported by the current Mayor “with a vengeance,” and that this community is “intentionally being left behind.” She feels that those advocating for more political action on the part of African Americans are not focused in the right direction, claiming that constituencies “hire” council people to “school us to the process” and to be the community’s “eyes and ears to what’s going on,” including being “brutally honest about what’s going on behind the scenes.” Arguing as well that youth are not engaged because they lack a “future or a hope in this city,” PH-3 said that studies have already shown discrimination in banking and housing, and “we have to believe” that it translates to contracting and access to startup loans as well. PH-4 would echo these sentiments, noting that her two young adult children no longer desire to live in Chattanooga, because there is “not enough opportunity, not enough diversity,” and that they are equipped through education to move anywhere, but other less fortunate youth are “locked in without opportunities” and “people have given up” (PH-4).

Access to both capital and knowledge regarding contracts being let was a major topic of the hearing, with PH-2 claiming that grant money is distributed by the City “like candy” to individuals from outside of Chattanooga and to Caucasian owned businesses. “I try to tell my people, you guys are missing out,” PH-2 said. He recalled one exchange with Council where a 20-year grant was extended to provide services for people with felony convictions and he asked if anyone followed up “a year or two years later to see if these people actually did what they said they would do” and was told that the council did not. “The reason we don’t have businesses down here (downtown Chattanooga) is because we can’t afford it, they don’t want us down here...when we come to the table to try to get the grant money they’re getting, we run into opposition,” PH-2 said. He has attempted to help others obtain grant and economic development funds from the City and claimed that they had been stonewalled because they were “of color.” Meanwhile, PH-2 feels that “big name” Caucasian owned companies, often the “buddies” or family of decision-makers, are getting contracts. In addition, he cited disparities in pay and housing. PH-5, owner of a local franchise, recalled attempting to break into the downtown area with a location in a sports facility, but not progressing in talks. “We deserve more,” she said, and pointed to a similar African American owned franchise that was able to develop in a sports development in Atlanta. “It’s not like we’re not doing what we need to do” (PH-5). Both PH-2 and PH-3 discussed gentrification in the City as a pertinent issue, noting that government funds are used to hire large, private firms to develop areas in which African Americans could previously afford to live, effectively pushing them out of the community. Title VI was invoked several times, with both PH-3 and PH-4 asserting that the disparate impact of such development decisions, intentional or no, is a violation, and suggesting that the displaced African Americans could potentially sue the City of Chattanooga.

PH-1, an owner of a downtown restaurant, also spoke of gentrification as an issue that demonstrates the lack of diverse business ownership and contracting. Despite being “the person that they’ll call when they need a Female of color to come and speak to others about business opportunities,” she feels alone on the Southside of the City as the only African American owned restaurant, saying that “it’s almost like you’re being squeezed out slowly because everything just costs so much more. Even though we helped build the southside...it is somewhat of a struggle.” She feels that the downtown area lacks “culture” and that she feels “lost” in that environment. “I don’t want to be the only black-owned business downtown,” PH-1 said, noting that the “community is expanding and they’re not taking us with them.” Cultural issues were forefront of mind for PH-8, a Native American citizen, who felt that efforts to discuss equitable contracting stopped

short of addressing the disparity in the arts and historical recognition in the City, noting that there have been no preservation efforts for African American and Native American sites in Chattanooga, and that the City tends to conflate Cherokee with Native American, though the Muscogee were present previously. He advocated for more efforts to engage members of the minority community in producing the art and memorials that are intended to represent them and their history.

E. Focus Group

A focus group was held in Chattanooga, TN on April 16, 2019 with thirteen (13) local business owners. The purpose of the focus group was to create a relaxed and semi-anonymous environment in which individuals could speak freely about their experiences doing business with the City of Chattanooga and could dialogue with one another about the same. The utility of the focus group model is that it allows the Study team to observe interactions between business owners, to occasionally gather more intimate information than would be shared in public forum, and to identify areas of group consensus, dissension, frustration, and confusion. All of these elements can be revealing for the ultimate goal of gaining perspective on what is working in the City's contracting process and what, if anything, could stand to be improved. This group consisted of business owners who ran supply, construction, professional, technology, and janitorial companies. They also represented a mix of ethnic and gender backgrounds including African American owned firms, Asian American owned firms, Native American owned firms, and Females owned firms.

Though there was quite a bit of conversation around the status of DBE as one that can diminish a firm, with several participants saying that they try not to highlight it above their credentials, it was also noted that majority firms are sometimes reluctant to work with DBEs. One (1) firm owner, FG-3, stated that he chose not to respond to prime contractors who called him to fulfill "the 15 percent" DBE goal, saying that it has become a "pool for larger companies to fish in." Another participant supported his reasoning, saying that responding to those calls often ends in the minority owned or Females owned firm being "dropped" once the bid is won. FG-2 believes that the only interest is in showing "good faith" efforts by calling people on the DBE list, calling this the "escape clause." "People don't like to be forced to do anything, so they will push for what they want because they didn't want to use DBE firms anyway," FG-3 stated. When asked if certification has been helpful, one participant said that it was simply "a lot of paperwork" without many benefits besides "a little credibility" (FG-10). FG-13 said that she went through the process of getting certified at the State level and is confused about whether she had to go through the City process. "I don't understand why we had to go through it twice if the City's process] was a watered-down version of the State." This was identified as time consuming, and one (1) firm owner indicated he felt that the certifications from the State should be recognized at the City level.

Another concern was that there are not "policies in place" (FG-13) to make certification worthwhile. FG-13 said that she was told by the purchasing department that the certification does not "legally" give an advantage to DBE firms and she remains unsure what advantage the certification holds for her firm. There was considerable discussion from one attendee about what drives City departments to consider DBE firms without an "incentive." FG-1 also feels that the benefits of certification with the City are unclear, pointing to other entities in the state which have discount programs and bid incentives another attendee stated that he feels that his certification, which he has held for 23 years, has been useless in getting work with the City,

and recalled a conversation with City officials in which he was told that it was against state law for the City to set portions of a project aside for a DBE (commonly termed “set-asides”). “Then why are you certifying me?” FG-8 asked. He feels that the programs have “no teeth” and “it’s discouraging” to attempt to do business with the City and lose out.

Competition with larger firms was also an issue. “The same people win those contracts over and over and over again,” FG-8 feels. He said that he asked at a City meeting why the same company continues to win the office supply contract and they asked him, “Can you beat Staples and Amazon?” (FG-8). In his estimation, certifications will not be helpful until “we change the way we do business, which, to FG-8, means providing certified firms with opportunities to compete against the international giants and large competitors. He suggested, to murmured agreement from others in the room, breaking out contracts so that smaller firms can be more competitive. FG-1 pointed out that small businesses lose out to larger firms due to capacity but can “thrive” on the small dollar contracts that are not formally bid, and which she says go to “Good ole’ boys.” “You can only get to that if there is a good relationship with the buyer” (FG-1). FG-4 wants the City to provide a list of buyers that vendors can reach out to inquire about upcoming purchases. FG-11 noted that the City often places an emphasis on the lowest bid, and FG-1 felt that this keeps smaller firms out of competition. FG-12 feels that taking the lowest bidder asks him to work “for free” and that large firms can afford to underbid a project. “Getting starved out might be easy for a large company but might kill a smaller company,” FG-12 said.

In addition, experience requirements were cited as problematic, and are requirements which FG-8 believes are not applied fairly across the board. Another firm owner agreed, saying that exemplary performance in her business should allow her to at least be “looked at,” and perhaps the 10-year experience requirement could be waived under special circumstances. FG-1 stated that waivers would help the City to “help the community” by dealing with DBE firms on a case-by-case basis. One (1) participant expressed a concern with the lack of feedback or “debriefing” after losing a bid, with FG-13 stating that the people at the City were “nice” when she met with them, but that the meeting itself was not helpful in understanding what lost her the contract because the officials say that they cannot comment on future business. FG-13 feels that once she wins the award, there should be a process for holding the City accountable if the scope changes and it then has to be re-issued. This process cost her business resources, and she feels that there is not enough oversight to ensure that situations like hers do not harm businesses. FG-13 said that she is “in the negative” from attempting to do business with the City. FG-7 also recalled a bad experience with the City, saying that she was called to provide a landscape proposal and met with the City but was told it was outside of their budget. According to FG-7, she saw her work five months later . She believes that the City used her plan without her permission, and never contacted her to do the work.

There was widespread consternation in the group at the City’s unwillingness or inability to provide “set-asides” for DBEs, when they felt that the federal government was able to do so. FG-8 claims that “The effort has never been there” from the City, echoing the public hearing participants by referencing the history of council votes on the disparity study. Those present—consistent with our online survey—said that they were willing to do business with the City of Chattanooga, but some participants identified a lack of education around the procurement processes and the City’s unwillingness to provide opportunities to small and minority firms as reasons for the perceived lack of minority participation. Only one (1) firm owner, FG-9, dissented, saying that his firm has lost only when they had a low-quality proposal. “If you want to dazzle, you have to perform,” FG-9 said, prompting FG-8 to reply that his firm always performs well on projects.

E. Bid Protest Review

The Study team also engaged in a discrimination review of bid protest documents related to City of Chattanooga procurement. It was GSPC's intent to engage in a comprehensive review of all protest documents over the Study period to help determine whether there had been allegations of discrimination against the City in direct awarding of contracts. However, due to bid protest documents not being uniformly managed prior to 2015, GSPC was unable to access all of the bid protest from the Study period.

To supplement, GSPC was provided protest documents for eight (8) separate bids and corresponding documents from FY2016. None of the protestors alleged discrimination of any form as the reason for their protest. Therefore, their cases were not directly relevant to this.

However, this review did shed some light on the City of Chattanooga bid protest process and how aspects of it may be relevant to future discrimination reviews. First, in every reviewed case, the Purchasing Director was specifically responsive to each of the claims posited in written letters. Wherever details were needed to explain her determinations, the claims from the protestor were directly quoted for clarity with response to each claim.

Additionally, those who wanted to appeal the decision were given the opportunity to have a determination from the City Attorney's office. However, it was confirmed by the Purchasing Director that they need to do a better job of ensuring protestors are aware of this option stating that "[t]he Purchasing Manual doesn't currently call for a particular format or procedure for relaying through Legal (only that it is simply done)." It is unclear if this issue has been rectified.

Overall, on paper, the bid protest process appears to be responsive and seems to be equipped to deal with future claims of discrimination.

F. Email comments

The Study team received messages to its ChattanoogaStudy@gspclaw.com email address throughout the study, and some in response to the survey conducted. Of the eight (8) comments, some were simply indicating their refusal to participate, but others had substantive concerns that they wished to express. For instance, EC-1 suggested that the City should update their website, citing issues with the certification process, difficulties with form submission, and an inability to search for bids that have goals attached. Another commenter focused on the conduct of the City in a personal matter related to real estate and the "gentrification in the inner city," a comment that echoed the concerns of many in the public hearings. EC-5 recalled a small contract that was allegedly taken away by the City Attorney's office due to a clerical error. The commenter viewed this as evidence of the "walls of discrimination, and bias." Another message identified an "unfortunate intolerance" for minority owned firms in the judicial system, which is where she seeks contracts (EC-3). Though EC-3 says that her business has held contracts with the State of Tennessee,

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she recounts being “undermined by those in key positions” in Chattanooga through late payment and being stripped of contracts that were eventually re-awarded to a non-DBE firm. “I was told, ‘we want our own,’” EC-3 writes, stating that she chooses not to bid with the City as a result. She feels that there are people “within the system” who have an “intolerance for people of color,” and create “discord” and hostile work environments.

G. Conclusion

From the various anecdotal evidence gathered, including public hearings, focus groups, email comments, an online survey, and organizational meetings, it is clear that the minority business community in Chattanooga has concerns regarding the utility of certification, the City’s commitment to diverse contracting, and the overall economic impact of some of the structural and demographic changes in Chattanooga in recent years. While some organization representatives and participants expressed dissatisfaction with the opportunities presented to minority youth in terms of workforce development, and to minority businesses in terms of their ability to develop and grow, it was also clear that many see Chattanooga as an otherwise economically thriving community which has potential to include citizens and business owners from diverse backgrounds in that growth. The broad perception of city-wide inequality pervaded the various methods of anecdotal data collection, contributing to a narrative of exclusion both in the contracting arena and elsewhere.

From the focus group, there emerged a clear desire for the City of Chattanooga to apply enforceable goals—“with teeth”—to both ensure prime contractor compliance and opportunities for DBE businesses. The public hearing, though more focused on holistic issues of community economic health and well-being, demonstrated the frustration among some business owners and activists regarding the lack of diversity in the “downtown” area, and a sense that particularly African American owned businesses and residents are being priced out. Recurrent references to potential legal action against the City for discrimination are evidence of this sense of displacement and dismissal. The survey and focus group revealed that firm owners have little confidence in the motives of prime contractors in engaging DBEs and feel that they must be monitored under the program. The survey also showed that, while good percentages of firms across demographics are certified, few are registered, largely due to the fact that they were unaware of the registry or did not know how to join. Organization representatives see opportunities for the City of Chattanooga to build the capacity of DBEs and to reach out to the minority business community in a more focused way. Some of the suggestions from participants in the anecdotal data that may be incorporated into the City’s current program include increased outreach around certification, increased contact with diverse business owners, and greater transparency in procurements. Debriefing firm owners after a failed bid, advertising upcoming projects widely, and assessing the need for capital and bonding assistance are also possible routes for improvement.

VIII. CONCLUSION

Economic opportunity for MWBE firms across the marketplace has been depressed in both the Chattanooga public contracting and in the private sector marketplace. Despite exhaustively surveying and calling prime contractors from the Study period, GSPC was unable to identify a reasonable amount of MWBE participation in contracting as could be expected in the marketplace. Overall, GSPC was unable to establish more than minimal participation by MWBE firms in both City of Chattanooga prime contracting and subcontracting.

The presence of broad geographic markets in most contract categories illustrates that the City is doing a considerable amount of contracting outside of the Chattanooga metropolitan area and, in some cases, outside of the State of Tennessee completely. While some may argue that these expansive markets and small supplier base is indicative of a lack of overall availability by MWBE firms in the marketplace, or limitations in the ability of these firms to adequately perform on these contracts, the GSPC availability and threshold analyses provide an alternative explanation.

GSPC was able to identify available MWBE firms in the Chattanooga marketplace, many of whom have already indicated an interest in public contracting. The threshold analysis responds to questions regarding the capacity of these firms to perform on contracts. With the discrepancy in contract sizing (several small contracts for few dollars/few large contracts with the majority of the spending) suggest a few critical implications:

1. The prevalence of small City contracts suggests that the majority of firms may be self-performing the work rather than subcontracting.
2. The small average and median contract sizes are suggestive that contract size should not be prohibitive to small firms seeking to perform as prime contractors on City projects.
3. On the few large dollar contracts that make up the majority of all City spending without subcontracting policies or programs, large contract awards may have produced limited contract opportunity for local small and diverse firms.
4. Without tracking and reporting, any subcontracting that may have been done on large contracts may have occurred with vendors outside of the City metro area, reducing the benefit of new developments for local businesses.
- 5.

Lastly, through anecdotal research, GSPC was able to uncover perceptions by the diverse community of being forgotten in the midst of the City's economic expansion. Diverse communities felt they were being squeezed out of their neighborhoods through gentrification and were being provided limited economic opportunity in entrepreneurship, contracting, and workforce. To the business community, there is a significant need for an increase in procurement transparency, business outreach, training and development that the City's current DBE program is not be adequately equipped to meet.

While the City has recently given an increased focus to issues of diversity, inclusion and supplier diversity, the GSPC Study illustrates where the City has room to make significant improvement. With a thriving and expanding local economy, MWBE firms reported feeling marginalized from participating in the City's growth, an anecdote proven true by the study's MWBE utilization. Without a well-defined program preceding this Study, there was no consistent benchmark on which to base proper expectations or measures of participation in City procurements. With the City's stated intent to diversify its contractors, suppliers, and vendors, the City can now move forward with data and tools to meet those objectives.

The depth of the disparity in public contracting and private markets found by GSPC in Chattanooga is not based on one moment in time, specific individual or administration, but a cumulative history. With a local economy seeking to continue its growth, increasing opportunities for businesses owned by people of color, through economic development and supplier diversity are priorities in building equitable and sustainable communities. With this focus on the future, GSPC has developed these recommendations and will support the City by making every effort to assist in the creation of a more equitable Chattanooga.

Chattanooga Disparity Study Appendices

Appendix A
Expanded Legal Analysis

APPENDIX A -EXPANDED LEGAL ANALYSIS

A. Expanded Legal Analysis

Having provided an overview of the de facto genesis of diversity studies, the following underscores the legal benefit to such studies should an MBE/WBE program or initiative be challenged in a court of law.

1. Overview of Legal Challenges to MBE/WBE Programs and Legislation

There are several important legal standards and considerations which arise when a constitutional challenge to an MBE/WBE program is initiated. Matters such as standing, the burden(s) of proof, the level of judicial scrutiny to be applied, and the types of evidence necessary for the court's evaluation, must all be addressed. Each of these concepts is addressed in turn.

a. The Standing Requirement

Legal “standing” to bring suit is an absolute requirement for one seeking relief in any federal court of the United States or any state court called upon to decide a matter upon federal law. U.S. Const. Art. III, § 2, Cl 1; Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992). Though “some of its elements express merely prudential considerations that are part of judicial self-government, the core component of standing is an essential and unchanging part of the case-or-controversy requirement of Article III.”⁶⁶

[S]tanding contains three elements. First, the plaintiff must have suffered an injury in fact -- an invasion of a legally protected interest which is . . . concrete and particularized . . . [; s]econd, there must be a causal connection between the injury and the conduct complained of . . . [; and t]hird, it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision [of the Court wherewith the matter is brought]. [Lujan, 504 U.S. at 560-61 (internal punctuation and citations omitted)]

Under the traditional standing analysis, in order to satisfy the “injury in fact” requirement, plaintiffs must establish a causal connection between the injury, the ordinance, and the likelihood that the injury will be redressed by a favorable decision. Moreover, the courts may not tolerate a lawsuit unless the plaintiff shows some “concrete and particularized” injury that is in fact imminent and which amounts to something more than “conjectural or hypothetical” injury. Price v. City of Charlotte, 93 F.3d 1241, 1247 (4th Circuit 1996) (citing Lujan).

In the federal judicial circuit covering the City of Chattanooga, the “injury in fact” element for standing was analyzed in Associated General Contractors of America v. City of Columbus, 172 F.3d 411 (6th Cir. 1999). In that case, a contractors’ association brought an action challenging the constitutionality of the City of

⁶⁶ Lujan, 504 U.S. at 560.

Columbus' minority business set-aside ordinance. After a decision by the district court striking down the ordinance, the City sought relief from the judgment citing a revised, recently enacted set-aside ordinance.

On appeal, the Sixth Circuit held that the contractors' association could not demonstrate the injury-in-fact required to establish standing to challenge the constitutionality of the second minority business set-aside ordinance, as the ordinance had not yet been put into effect:

Once the [first] set-aside program was gone, the constitutional violation was gone, and no condition requiring repair remained. The remedy was complete. The agreed order, however ... enjoined the City from enacting any new set-aside legislation without first obtaining District Court approval--thus, the decree aimed at eliminating a condition that did not yet exist, a condition that, at most, might violate the Constitution, if that condition should in fact materialize. [Associated General Contractors, 172 F.3d at 418]

The goal, of course, is to design and implement an MBE/WBE program in such a manner that no legitimate claims of "reverse discrimination" by majority contractors will result, and thus, no constitutional challenge will ensue. Absent achievement of such a program, standing issues will need to be addressed at the outset of any litigation.

b. Burdens of Production/Proof

As noted above, the Croson court struck down the City of Richmond's minority set-aside program because the City failed to provide an adequate evidentiary showing of past and present discrimination as was its initial burden.⁶⁷ Since the Fourteenth Amendment only allows race-conscious programs that narrowly seek to remedy particularized discrimination, the Court held that state and local governments "must identify that discrimination . . . with some specificity before they may use race-conscious relief." The court's rationale for judging the sufficiency of the City's factual predicate for affirmative action legislation was whether there existed a "strong basis in evidence for its [government's] conclusion that remedial action was necessary."⁶⁸

The initial burden of production on the state or local governmental entity is to demonstrate a "strong basis in evidence" that its race- and gender-conscious contract program is aimed at remedying identified past or present discrimination. See West Tennessee Chapter of Associated Builders v. City of Memphis, 302 F.Supp.2d 860, 863 (W.D. Tenn. 2004) (citing Croson; Adarand). Merely stating a "benign" or "remedial" purpose does not constitute a "strong basis in evidence" that the remedial plan is necessary, nor does it establish a prima facie case of discrimination. Thus, the local government must identify the discrimination it seeks to redress, (Croson, 488 U.S. at 500-01), and produce particularized findings of discrimination.

A governmental entity may, for example, establish an inference of discrimination by using empirical evidence that proves a significant statistical disparity between the number of qualified MBEs/WBEs, the number of MBE/WBE contractors awarded a contract by the governmental entity, or MBEs/WBEs brought in as subcontractors by prime contractors to which a contract is awarded.

The courts maintain that the quantum of evidence required for the governmental entity is to be determined on a case-by-case basis, and in the context and breadth of the MBE/WBE program it purports to advance.

⁶⁷ Croson, 488 U.S. at 498-506.

⁶⁸ Croson, 488 U.S. at 500 (quoting Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 277, 106 S.Ct. 1842, 1849 (1986)).

See Concrete Works, 36 F.3d 1513 (10th Cir. 1994). If the local government is able to do this, then the burden shifts to the challenging party to rebut the municipality's showing.⁶⁹

Once the governmental entity has shown acceptable proof of a compelling interest in remedying past discrimination and illustrated that its plan is narrowly tailored to achieve this goal, the party challenging the affirmative action plan bears the ultimate burden of proving that the plan is unconstitutional. Sherbrooke Turf, Inc. v. Minnesota D.O.T., 345 F.3d 964, 971 (8th Cir. 2003) (“Sherbrooke and Gross Seed have the ultimate burden of establishing that the DBE program is not narrowly tailored.”); Geyer Signal, Inc. v. Minnesota D.O.T., 2014 WL 1309092, *26 (D. Minn. 2014) (“The party challenging the constitutionality of the DBE program bears the burden of demonstrating that the government's evidence did not support an inference of prior discrimination.”), citing Adarand III, 228 F.3d at 1166.

2. Equal Protection and Judicial Scrutiny

The Fourteenth Amendment provides that “No state shall . . . deny to any person within its jurisdiction the equal protection of the laws”. U.S. Const. amend. XIV, § 1. Courts determine the appropriate standard of equal protection review by “[f]irst. . . [determining] whether a state or local government has developed the program, or whether Congress has authorized the program's creation”, then by examining the protected classes embodied in the statute. S. J. Groves & Sons Company v. Fulton County et. al., 920 F.2d 752, 767 (11th Cir. 1991).

Because the program instituted by the City of Chattanooga makes classifications based both on race/ethnicity and on gender, each is addressed in this analysis with respect to the applicable standard of review (e.g., strict or intermediate scrutiny).

a) Strict Scrutiny for Race-Based Classifications

“We have held that all racial classifications imposed by government must be analyzed by a reviewing court under strict scrutiny.” Grutter v. Bollinger, 539 U.S. 306, 326 (2003); see also Adarand II, 515 U.S. at 212 (same). The Fourth Circuit previously put into sharp relief its view of the rationale for this level of judicial review:

Racial and ethnic distinctions of any sort are inherently suspect and thus call for the most exacting judicial examination. Wygant v. Jackson Board of Education, 476 U.S. 267, 273, 106 S.Ct. 1842 1846, 90 L.Ed.2d 260 (1986) (plurality opinion) (quoting Regents of the University of California v. Bakke, 438 U.S. 265, 291, 98 S.Ct. 2733 2748, 57 L.Ed.2d 750 (1978) (Powell, J.)). The rationale for this stringent standard of review is plain. Of all the criteria by which men and Females can be judged, the most pernicious is that of race. The injustice of judging human beings by the color of their skin is so apparent that racial classifications cannot be rationalized by the casual invocation of benign remedial aims. City of Richmond v. J.A. Croson Co., 488 U.S. 469, 500, 109 S.Ct. 706, 724, 102 L.Ed.2d 854 (1989). While the inequities and indignities visited by past discrimination are undeniable, the use of race as a reparational device risks perpetuating the very race-consciousness such a remedy purports to overcome.... It thus remains our constitutional premise that race is an impermissible arbiter of human fortunes. [Podberesky v. Kirwin, 38 F.3d 147, 152 (4th Cir. 1994) (quoting Maryland Troopers Ass'n v. Evans, 993 F.2d 1072, 1076 (4th Cir.1993)]

⁶⁹ Id.

“Under strict scrutiny, a racial classification must (1) serve a compelling state interest and (2) be narrowly tailored to achieve that interest.” Tuttle v. Arlington County School Board, 195 F.3d 698, 704 (4th Cir. 1999) (emphasis added) (citing Ararand II).⁷⁰

b) Intermediate Scrutiny for Gender-Based Classifications

Though still a live debate in some federal circuits, it appears settled in the Sixth Circuit that programs with gender-based classifications are evaluated for constitutionality under the same strict scrutiny standard applied to race-based classifications, and not a more relaxed level of scrutiny (such as intermediate scrutiny). See Brunet v. City of Columbus, 1 F.3d 390, 403-04 (6th Cir. 1993); Conlin v. Blanchard, 890 F.2d 811, 816 (6th Cir. 1989).

c) “Compelling Public Interest” Considerations

For a local government to enact a constitutionally valid MBE/WBE program or ordinance which applies to awards of its contracts, it must show a compelling governmental interest. H.B. Rowe Company, Incorporated v. W. Lyndo Tippett, 615 F.3d 233 (4th Cir. 2010):

Although imposing a substantial burden, strict scrutiny is not automatically “fatal in fact.” Adarand II, 515 U.S. at 237, 115 S.Ct. 2097. After all, “[t]he unhappy persistence of both the practice and the lingering effects of racial discrimination against minority groups in this country is an unfortunate reality, and government is not disqualified from acting in response to it.” Id.; Alexander, 95 F.3d at 315. In so acting, a governmental entity must demonstrate it had a compelling interest in “remedying the effects of past or present racial discrimination.” Shaw v. Hunt, 517 U.S. 899, 909, 116 S.Ct. 1894, 135 L.Ed.2d 207 (1996).

Thus, to justify a race-conscious measure, a state must “identify that discrimination, public or private, with some specificity,” Croson, 488 U.S. at 504, 109 S.Ct. 706, and must have a “strong basis in evidence for its conclusion that remedial action [is] necessary,” id. at 500, 109 S.Ct. 706 (quoting Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 277, 106 S.Ct. 1842, 90 L.Ed.2d 260 (1986) (plurality opinion)); see also Podberesky v. Kirwan, 38 F.3d 147, 153 (4th Cir.1994). As courts have noted, “there is no ‘precise mathematical formula to assess the quantum of evidence that rises to the Croson ‘strong basis in evidence’ benchmark.” Rothe Dev. Corp. v. Dep’t of Def., 545 F.3d 1023, 1049 (Fed.Cir.2008) (Rothe II) (quoting W.H. Scott Constr. Co. v. City of Jackson, 199 F.3d 206, 218 n. 11 (5th Cir.1999)). [H.B. Rowe, at 241]

This compelling interest must be proven by particularized findings of discrimination. The strict scrutiny test ensures that the means used to address the compelling goal of remedying discrimination “fit” so closely

⁷⁰ See also Michigan Road Builders Ass’n v. Milliken, 834 F.2d 583, 589-90 (6th Cir. 1987) (setting forth two-part analysis); Associated General Contractors v. Drabik, 214 F.3d (6th Circuit 2000); Cleveland Firefighters for Fair Housing v. City of Cleveland, 917 F.Supp.2d 668, 6679-80 (N.D. Ohio 2013). The strict scrutiny test further requires a “searching judicial inquiry into the justification” for the race-conscious remedy to determine whether the classifications are remedial or “in fact, motivated by the illegitimate notions of social inferiority or simple social politics.” Doe v. Sundquist, 943 F. Supp. 886 (M.D. Tenn. 1996).

that there is little likelihood that the motive for the racial classification is illegitimate racial prejudice or stereotype.⁷¹

The relevant case law establishes that the compelling state interests of remedying past discrimination and of avoiding discrimination in the context of governmental procurement programs are well-accepted, and not controversial at this point. See W.H. Scott Const. Co. v. City of Jackson, 199 F.3d 206, 217 (5th Cir. 1999) (“Combating racial discrimination is a compelling government interest.”); Croson, 488 U.S. at 492 (“It is beyond dispute that any public entity, state or federal, has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evils of private prejudice.”); Adarand II, 515 U.S. at 237 (“The unhappy persistence of both the practice and the lingering effects of racial discrimination against minority groups in this country is an unfortunate reality, and government is not disqualified from acting in response to it.”).

3. The Extent of Participation in Discrimination by the Public Entity

The courts have uniformly held that general societal discrimination is insufficient to justify the use of race-based measures to satisfy a compelling governmental interest.⁷² Rather, there must be some showing of prior discrimination by the governmental actor involved, either as an “active” or “passive” participant.⁷³

The upshot of this dual-faceted evaluation of the enacting governmental entity is that, even if the entity did not directly discriminate, it can take corrective action. Engineering Contractors, 122 F.3d at 907 (“[I]f the County could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, the Supreme Court has made it clear that the [County] could take affirmative steps to dismantle such a system.”); Croson, 488 U.S. at 492 (“Thus, if the city could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.”).

Subsequent lower court rulings have provided more guidance on passive participation by local governments. In Concrete Works, 36 F.3d 1513, the Tenth Circuit held that it was sufficient for the local government to demonstrate that it engaged in passive participation in discrimination rather than showing that it actively participated in the discrimination:

Neither Croson nor its progeny clearly state whether private discrimination that is in no way funded with public tax dollars can, by itself, provide the requisite strong basis in evidence necessary to justify a municipality’s affirmative action program. Although we do not read Croson as requiring the municipality to identify an exact linkage between its award of public contracts and private discrimination, such evidence would at least enhance the municipality’s factual predicate for a race/gender-conscious program. [Id., 36 F.3d at 1529]

⁷¹ Croson; Engineering Contractors Ass’n v. Metropolitan Dade County, 122 F.3d 895, 906 (11th Cir. 1997). See also, Adarand II, 515 U.S. at 235.

⁷² Adarand II, 515 U.S. at 227; Croson, 488 U.S. at 496-97.

⁷³ Croson, 488 U.S. at 498. See also Ashton v. City of Memphis, 49 F. Supp.2d 1051, 1057 (W. D. Tenn. 1999) (citing Croson). As the court in Tennessee Asphalt clarified, “[g]overnmental entities are not restricted to eradicating the effects only of their own discriminatory acts.” 942 F.2d at 974. Thus, even if the governmental unit did not directly discriminate, it can take corrective action. Engineering Contractors, 122 F.3d at 907 (“[I]f the County could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry,” the Supreme Court has made it “clear that the [County] could take affirmative steps to dismantle such a system.”).

Thus, the desire for a government entity to prevent the infusion of public funds into a discriminatory industry is enough to satisfy the requirement.

The next question, however, is whether a public entity has the requisite factual support for its MBE/WBE program in order to satisfy the particularized showing of discrimination required by Croson. This factual support can be developed from anecdotal and statistical evidence, as discussed hereafter.

B. Types of Evidence

The types of evidence routinely presented to show the existence of a compelling interest include statistical and anecdotal evidence.⁷⁴ Where gross statistical disparities exist, they alone may constitute prima facie proof of a pattern or practice of discrimination. Anecdotal evidence, such as testimony from minority contractors, is most useful as a supplement to strong statistical evidence, as it cannot carry the burden for the entity by itself.

The majority decision in Croson implicitly endorsed the inclusion of personal accounts of discrimination, but Croson and subsequent decisions also make clear that selective anecdotal evidence about MBE/WBE experiences alone would not provide an ample basis in evidence to demonstrate public or private discrimination in a municipality's construction industry.⁷⁵

In summary, personal accounts of actual discrimination or the effects of discriminatory practices are admissible and effective, and anecdotal evidence of a governmental entity's institutional practices that provoke discriminatory market conditions is particularly probative. In order to carry the day, however, such evidence must be supplemented with strong statistical proof:

A state need not conclusively prove the existence of past or present racial discrimination to establish a strong basis in evidence for concluding that remedial action is necessary. See, e.g., Concrete Works, 321 F.3d at 958. Instead, a state may meet its burden by relying on “a significant statistical disparity” between the availability of qualified, willing, and able minority subcontractors and the utilization of such subcontractors by the governmental entity or its prime contractors. Croson, 488 U.S. at 509, 109 S.Ct. 706 (plurality opinion). We further require that such evidence be “corroborated by significant anecdotal evidence of racial discrimination.” Md. Troopers Ass'n, Inc. v. Evans, 993 F.2d 1072, 1077 (4th Cir.1993). [H.B. Rowe, 615 F.3d at 241]

Accordingly, a combination of statistical disparities in the utilization of MBEs/WBEs and particularized anecdotal accounts of discrimination by the MBEs/WBEs (or others) are required to satisfy the factual predicate. See Middleton et. al. v. City of Flint, 92 F.3d 396, 405 (6th Cir. 1996) (“Anecdotal evidence is most useful as a supplement to strong statistical evidence[.]”).

⁷⁴ Croson, 488 U.S. at 501.

⁷⁵ Croson, 488 U.S. at 480 (noting as a weakness in the City's case that the Richmond City Council heard “no direct evidence of race-conscious discrimination on the part of the city in letting contracts or any evidence that the City's prime contractors had discriminated against minority-owned subcontractors”); See also Engineering Contractors Ass'n, 122 F. 3d at 925 (“[W]e have found that kind of evidence [anecdotal] to be helpful in the past, but only when it was combined with and reinforced by sufficiently probative statistical evidence.”).

1. Post-enactment

Before looking at specific types of statistical and anecdotal evidence a governmental entity may utilize in order to meet its initial burden to show a “strong basis in evidence” that its race- and gender-conscious contract program is aimed at remedying identified past or present discrimination, note that the evidence offered need not pre-date the enactment of the program or legislation under challenge.

In Croson, the Court stated that a state or local government “must identify that discrimination . . . with some specificity before they may use race-conscious relief.”⁷⁶ However, the Court declined to require that all relevant evidence of such discrimination be gathered prior to the enactment of the program. This is important, as it allows a governmental entity to utilize a variety of evidentiary sources (as discussed below), but also to supplement such pre-enactment evidence with disparity evidence gathered after the program has been initiated.

Pre-enactment evidence refers to evidence developed prior to the enactment of an MBE/WBE program by a governmental entity. Such evidence is strong predicate for the decision to implement such a program in the first place, and a lack of relevant pre-enactment evidence of discrimination may make it difficult for a governmental entity to satisfy the standards established in Croson.

Post-enactment evidence is that which has been developed since the affirmative action program was enacted and therefore was not specifically relied upon as a rationale for the government’s race/gender-conscious efforts. As such, post-enactment evidence can often be devalued when a constitutional challenge is made, though most courts applying Croson’s evidentiary requirement allow reliance on post-enactment evidence. See, e.g., Contractors Ass’n., 6 F.3d, at 1003-04 (3rd Cir. 1993).

The federal courts in the Sixth Circuit have often wrestled with the relative value or significance to be placed on post-enactment evidence. In West Tennessee Chapter of Associated Builders and Contractors v. Board of Education of the Memphis City Schools, 64 F.Supp.2d 714 (W.D. Tenn. 1999), the district court faced the issue of whether post-enactment evidence was sufficient to establish a strong basis upon which a race-conscious program can be supported. The late Judge Jerome Turner opined that although the court in Croson was not faced with the issue of post enactment evidence, much of the language in the opinion suggested that the court meant to require the governmental entity to develop the evidence before enacting a plan.

At the appellate level, the Sixth Circuit addressed this issue in re: City of Memphis, 293 F.3d 345 (6th Circuit 2002), though much of the discussion on post-enactment evidence is dicta; the court having denied interlocutory review.⁷⁷

In 1996, the City of Memphis adopted a Minority and Females Business Enterprise Procurement Program (“MWBE”), based upon findings from a disparity study covering the period from 1988 to 1992. The West Tennessee Chapter of Associated Builders and Contractors, Inc. and Zellner Construction Company, Inc. filed suit against the City of Memphis in January 1999, claiming that the City’s MBWE program violated the Equal Protection Clause of the Fourteenth Amendment.

In response to the lawsuit, Memphis proposed to commission a new disparity study, covering the period from 1993 to 1998. The City asserted that the post-enactment study could be used as evidence to demonstrate a compelling governmental interest. Six months after the initiation of the lawsuit, the district court ruled that Memphis could not introduce the post-enactment study as evidence of a compelling

⁷⁶ 488 U.S. at 504.

⁷⁷ 293 F.3d 348.

governmental interest and initially denied the City’s motion to certify an interlocutory appeal. In response to the City’s motion to reconsider, the district court certified an interlocutory appeal, though notice of this decision was not rendered to the parties in a timely fashion.

After deciding that it had jurisdiction to rule on the matter, the Sixth Circuit examined the issue of post-enactment evidence through its analysis of the three requirements for interlocutory appeal: 1) whether the order involves a controlling issue of law; 2) whether a substantial ground for difference of opinion exists regarding the correctness of the decision; and, 3) whether an immediate appeal may materially advance the ultimate termination of the litigation. Of the three requirements, the Sixth Circuit focused on the second. The appeals court observed that the district court had relied upon the City’s assertion that substantial ground for difference of opinion existed regarding the value of post-enactment evidence.

The Sixth Circuit rejected the City’s argument, stating that “[t]his issue...appears to have been resolved in this circuit.” The Court then cited to the ruling in Drabik to imply that post-enactment evidence was inadmissible:

The City argues that the court in Drabik did not find that post enactment evidence was inadmissible...Although Drabik did not directly address the admissibility of post enactment evidence, it held that a governmental entity must have preenactment evidence sufficient to justify a racially conscious statute. It also indicates that this circuit would not favor using post enactment evidence to make that showing. [In re: City of Memphis, 293 F.3d at 351]

Ultimately, the appeals court denied the City’s application for permission to appeal because “[e]ven if we concluded that there is a substantial difference of opinion, the issue presented in this case is not a controlling legal issue.”⁷⁸ Because this discussion of the admissibility of post-enactment evidence occurred in the dicta of the opinion, the case does not represent a change in the Sixth Circuit at the present time. Therefore, a race-/gender-conscious program implemented by the City of Chattanooga may be supported by post-enactment evidence of discrimination at this time.

2. Statistical Data Generally

The Court in Croson explained that an inference of discrimination may be made with empirical evidence that demonstrates “a significant statistical disparity between the number of qualified minority contractors . . . and the number of such contractors actually engaged by the locality or the locality’s prime contractors.”⁷⁹ A predicate to governmental action is a demonstration that gross statistical disparities exist between the proportion of MBEs awarded government contracts and the proportion of MBEs in the local industry “willing and able to do the work,” in order to justify its use of race-conscious contract measures.⁸⁰

In order to adequately assess statistical evidence, there must be information identifying the basic qualifications of minority contractors “willing and able to do the job” and the Court must determine, based upon these qualifications, the relevant statistical pool with which to make the appropriate statistical comparisons.⁸¹ Although subsequent lower court decisions have provided considerable guidelines for statistical analyses sufficient for satisfying the Croson factual predicate, there are multiple methods that the courts have accepted for conducting statistical analyses. The most prevalent of these are outlined hereafter.

⁷⁸ 293 F.3d at 351.

⁷⁹ 488 U.S. at 509.

⁸⁰ Ensley Branch, 31 F.3d at 1565.

⁸¹ Engineering Contractors, 122 F. 3d. at 925.

3. Availability

The attempted methods of calculating MBE/WBE availability have varied from case to case. In Contractors Association of Eastern Pennsylvania v. City of Philadelphia, 6 F.3d 990 (3rd Cir. 1993), the Third Circuit stated that available and qualified minority owned businesses comprise the “relevant statistical pool” for purposes of determining availability. The court permitted availability to be based on the metropolitan statistical area (MSA) and local list of the Office of Minority Opportunity for non-MBEs/WBEs, which itself was based on census data.

In Associated General Contractors v. City of Columbus, the City’s consultants collected data on the number of MBE/WBE firms in the Columbus MSA in order to calculate the percentage of available MBE/WBE firms. Three sources were considered to determine the number of MBE/WBEs “ready, willing and able” to perform construction work for the city. Associated General Contractors of America v. City of Columbus, 936 F. Supp. 1363 (1996), reversed on related grounds, 172 F.3d 411 (6th Cir. 1999).

However, the Court found that none of the measures of availability purported to measure the number of MBEs/WBEs who were qualified and willing to bid as a prime contractor on City construction projects were because the City Auditor Vendor Payment History file, not the Subcontractor Participation Reports, nor the Contract Document Database of the City were attentive to which firms were able to be responsible or provide either a bid bond or performance bond. The Court wrote, “[t]here is no basis in the evidence for an inference that qualified MBE/WBE firms exist in the same proportions as they do in relation to all construction firms in the market.”⁸²

The issue of availability also was examined by the Eleventh Circuit in Contractors Association of South Florida v. Metropolitan Dade County, 122 F.3d 895 (11th Cir. 1997). There, the Court opined that when reliance is made upon statistical disparity, and special qualifications are necessary to undertake a particular task, the relevant statistical pool must include only those minority owned firms qualified to provide the requested services. Moreover, these minority owned firms must be qualified, willing and able to provide the requested services. If the statistical analysis includes the proper pool of eligible minorities, any resulting disparity, in a proper case, may constitute prima facie proof of a pattern or practice of discrimination.

As discussed above, the Sixth Circuit in Drabik ruled that the State of Ohio failed to satisfy the strict scrutiny standard to justify the state’s minority business enterprise act because it relied on statistical evidence that did not account for which firms were qualified, willing and able to perform on construction contracts.⁸³

4. Utilization

Utilization is a natural corollary of availability, in terms of statistical calculation. Different courts have applied utilization rates to different base measures, including percentage-based analyses regarding contract awards and dollars paid.

In Engineering Contractors,⁸⁴ the City’s consultants calculated the percentage of City contracting dollars that were paid to MWBE construction firms. This is referred to as the rate of utilization. From this point,

⁸² Associated General Contractors, 936 F. Supp. at 1389.

⁸³ Drabik, 214 F.3d at 736.

⁸⁴ 122 F.3d at 914.

one can determine if a disparity exists and, if so, to what extent. A similar methodology was utilized in Associated General Contractors of America v. City of Columbus.⁸⁵

In Cone Corp. v. Hillsborough County, 908 F.3d 908 (11th Cir. 1990), the following utilization statistics were developed and presented to justify an MBE program:

The County documented the disparity between the percentage of MBE contractors in the area and the percentage of contracts awarded to those MBE contractors. Hillsborough County determined that the percentage of County construction dollars going to MBE contractors compared to the total percentage of County construction dollars spent. . . . The data extracted from the studies indicates that while ten percent of the businesses and twelve percent of the contractors in the County were minorities, only 7.89 percent of the County purchase orders, 1.22 percent of the County purchase dollars, 6.3 percent of the awarded bids, and 6.5 percent of the awarded dollars went to minorities. The statistical disparities between the total percentage of minorities involved in construction and the work going to minorities, therefore, varied from approximately four to ten percent, with a glaring 10.78 percent disparity between the percentage of minority contractors in the County and the percentage of County construction dollars awarded to minorities. Such a disparity clearly constitutes a prima facie case of discrimination indicating that the racial classification in the County plan were necessary. [Id. at 915-16]

The Sixth Circuit signaled in Drabik, however, that statistical proof of under-utilization would be insufficient in and of itself to supply the justification for the utilization of a non race-neutral measure in public contracting practices.⁸⁶ The Drabik Court, did not read Croson as permitting remedial action of a non race-neutral type simply because of statistical findings of under-utilization of those minority companies that were in the ready, willing and able to perform a public contracting need category, but rather required that “governments . . . identify discrimination with some specificity before they may use race-conscious relief; explicit findings of a constitutional or statutory violation must be made.”⁸⁷

5. Disparity Indices

To demonstrate the under-utilization of MBEs/WBEs in a particular area, parties can employ a statistical device known as the “disparity index.” The use of such an index was explained, and cited approvingly, in H.B. Rowe.⁸⁸

In H.B. Rowe, after noting the increasing use of disparity indices, the court explained that the State (through a consulting firm) calculated a disparity index for each relevant racial or gender group covered by the MWBE (DBE) program, and further, conducted a standard deviation analysis on each of those indices using

⁸⁵ 936 F. Supp. 1363 (City calculated the percentage of City contracting dollars that were paid to MWBE construction firms)

⁸⁶ 214 F.3d at 735.

⁸⁷ 214 F.3d at 735. Moreover, the Drabik Court also indicated that the government would need to present evidence demonstrating “pervasive, systematic, and obstinate discriminatory conduct” in order to satisfy Croson. 214 F.3d at 737.

⁸⁸ 615 F.3d at 243-44.

t-tests.⁸⁹ The resulting calculations “demonstrated marked under-utilization of African American and Native American subcontractors,” according to the court.⁹⁰

The utility of disparity indices or similar measures to examine the utilization of minorities or Females in an industry has been recognized by a number of federal circuit courts. See Concrete Works, 36 F.3d at 1523 n. 10 (10th Cir.1994) (employing disparity index); Contractors Ass'n, 6 F.3d at 1005 (3d Cir.1993) (employing disparity index); Associated Gen. Contractors v. Coalition for Economic Equity, 950 F.2d 1401, 1414 (9th Cir.1991) (employing similar statistical data).

Specifically, courts have used these MBE/WBE disparity indices to apply the “strong basis in evidence” standard in Croson. As noted, the disparity index in H.B. Rowe was 0.46 for African Americans and was 0.48 for Native Americans. Id. at 245. Based on a disparity index of 0.22, the Ninth Circuit upheld the denial of a preliminary injunction to a challenger of the City of San Francisco's MBE plan based upon an equal protection claim. AGC v. Coal. for Economic Equity, 950 F.2d 1401, 1414 (9th Cir. 1991). Similarly, the Third Circuit held that a disparity of 0.04 was “probative of discrimination in City contracting in the Philadelphia construction industry.”⁹¹

6. Use of Standard Deviation

The number calculated via the disparity index (established above) is then tested for its validity through the application of a standard deviation analysis. Standard deviation analysis measures the probability that a result is a random deviation from the predicted result (the more standard deviations, the lower the probability the result is a random one). Social scientists consider a finding of two (2) standard deviations significant, meaning that there is about one (1) chance in 20 that the explanation for the deviation could be random, so the deviation must be accounted for by some factor.

As noted above, standard deviations were applied by the State of North Carolina in the statistical analysis utilized to defend its MBE/WBE program in H.B. Rowe.⁹² The Fourth Circuit described the significance of the findings as follows:

For African Americans the t-value of 3.99 fell outside of two standard deviations from the mean and, therefore, was statistically significant at a 95 percent confidence level. In other words, there was at least a 95 percent probability that prime contractors’ underutilization of African American subcontractors was not the result of mere chance. For Native American subcontractors, the t-value of 1.41 was significant at a confidence level of approximately 85 percent. [Id. at 245]

Similarly, the Eleventh Circuit has directed that “where the difference between the expected value and the observed number is greater than two or three standard deviations’, then the hypothesis that [employees] were hired without regard to race would be suspect.” Peightal v. Metropolitan Dade County, 26 F.3d 1545,

⁸⁹ Id. at 244. The disparity index is calculated by dividing the percentage of available MBE/WBE participation (amount of contract dollars) by the percentage of MBEs/WBEs in the relevant population of local firms. A disparity index of one (1) demonstrates full MBE/WBE participation, whereas the closer the index is to zero, the greater the MBE/WBE under-utilization. Some courts multiply the disparity index by 100, thereby creating a scale between 0 and 100, with 100 representing full MBE/WBE utilization. Engineering Contractors, 122 F.3d at 914.

⁹⁰ Id.

⁹¹ Contractors Ass’n, 6 F.3d at 1005.

⁹² 615 F.3d at 244-45.

1556 (11th Cir. 1994) (quoting Hazelwood School District et al. v. United States, 433 U.S. 308, quoting Castaneda v. Partida, 430 U.S. 482, 497 n.17, 97 S.Ct. 1272, 1281 n.17, (1977)).

7. Regression Analysis

The statistical significance of certain quantitative analyses was further evaluated in H.B. Rowe.⁹³ The H.B. Rowe court indicated that the appropriate test should resemble the one employed in Engineering Contractors, wherein two standard deviations or any disparity ratio that was higher than .80 (which is insignificant), should be used.⁹⁴

In evaluating the disparity evidence offered, and the regression analysis conducted by the State, the court favorably noted:

To corroborate the disparity data, MGT conducted a regression analysis studying the influence of certain company and business characteristics - with a particular focus on owner race and gender - on a firm's gross revenues. MGT obtained the data from a telephone survey of firms that conducted or attempted to conduct business with the Department. The survey pool consisted of a random sample of 647 such firms; of this group, 627 participated in the survey.

MGT used the firms' gross revenues as the dependent variable in the regression analysis to test the effect of other variables, including company age and number of full-time employees, and the owners' years of experience, level of education, race, ethnicity, and gender. The analysis revealed that minority and Females ownership universally had a negative effect on revenue. African American ownership of a firm had the largest negative effect on that firm's gross revenue of all the independent variables included in the regression model. These findings led MGT to conclude that "for African Americans, in particular, the disparity in firm revenue was not due to capacity-related or managerial characteristics alone." [Id. at 245-46; 250]

8. Geographic Scope

The Croson Court also observed that because discrimination varies across market areas, state and local governments cannot rely on national statistics of discrimination in the disputed industry to draw conclusions about prevailing market conditions in their respective regions.⁹⁵ However, to confine the permissible data to a governmental entity's strict geographical borders would ignore the economic reality that contracts are awarded to firms located in adjacent areas. Thus, courts closely scrutinize pertinent data related to the jurisdictional area of the state or municipality.

Generally, the scope of the statistical analyses pertains to the geographic market area from which the governmental entity offerors come. In addition, disparities concerning utilization, firm size, and formation are also relevant in determining discrimination in a marketplace. It has been deemed appropriate to examine the existence of discrimination against MBEs/WBEs even when these areas go beyond the geographical boundaries of the local jurisdictions. See Contractors Association of Eastern Pennsylvania v. City of Philadelphia, 91 F.3d 586, 604 (3rd Cir. 1996).

⁹³ 615 F.3d at 244-46.

⁹⁴ Id.; see also, infra, analysis using standard deviations.

⁹⁵ Croson, 488 U.S. at 504.

When utilizing evidence of discrimination from nearby public entities and from within the relevant private marketplace, however, extra-jurisdictional evidence must still pertain to the operation of an industry within geographic boundaries of the jurisdiction. As the court wrote in Tennessee Asphalt v. Farris, “[s]tates and lesser units of local government are limited to remedying sufficiently identified past and present discrimination within their own spheres of authority.”⁹⁶

C. Requirement for Narrowly Tailored Remedies

Under the Croson framework, any race-conscious plan must be narrowly tailored to ameliorate the effects of past discrimination. See Michigan Road Builders Ass’n v. Milliken, 834 F.2d 583, 589-90 (6th Cir. 1987). “Generally, while ‘goals’ are permissible, unyielding preferential ‘quotas’ will normally doom an affirmative action plan.” Virdi v. DeKalb County School District, 135 Fed. Appx. 262 (11th Cir. 2005); see also Sherbrooke Turf, 345 F.3d at 972 (citing Croson, 488 U.S. at 496).

The Fourth Circuit addressed the parameters of this requirement in Tuttle v. Arlington County, 195 F.3d 698:

When reviewing whether a state racial classification is narrowly tailored, we consider factors such as: (1) the efficacy of alternative race-neutral policies, (2) the planned duration of the policy, (3) the relationship between the numerical goal and the percentage of minority group members in the relevant population or work force, (4) the flexibility of the policy, including the provision of waivers if the goal cannot be met, and (5) the burden of the policy on innocent third parties. [Id. at 706 (citation omitted)]

In Croson, the Court considered similar factors, including (1) whether the city has first considered race-neutral measures, but found them to be ineffective; (2) the basis offered for the goals selected; (3) whether the program provides for waivers; and (4) whether the program applies only to MBEs who operate in the geographic jurisdiction covered by the program.⁹⁷

More refined guideposts are provided in several post-Croson cases wrestling with efforts to meet the “narrowly tailored” prong – which we simply list for ease of reference:

- Relief is limited to minority groups for which there is identified discrimination;
- Remedies are limited to redressing the discrimination within the boundaries of the enacting jurisdiction;
- The goals of the programs should be flexible and provide waiver provisions;
- Race- and/or gender-neutral measures should be considered; and
- The program should include provisions or mechanisms for periodic review and sunset.

Recall that, as discussed in Section 1 of this analysis, the Sixth Circuit in Associated General Contractors v. Drabik affirmed that Ohio’s MBEA statute was not narrowly tailored to remedy past discrimination because: (1) the MBEA suffered from under inclusiveness and over inclusiveness, (lumping together racial and ethnic groups without identified discrimination); (2) the MBEA lacked a sunset date; and (3) the state

⁹⁶ 942 F.2d 969, 974 (6th Cir. 1991).

⁹⁷ 488 U.S. at 507-08.

failed to provide specific evidence that Ohio had considered race-neutral alternatives before adopting the plan to increase minority participation.⁹⁸

Again, Drabik underscores that MBE/WBE Programs must be designed so that the benefits of the programs are targeted specifically toward those firms that faced discrimination in the local marketplace; to withstand a challenge, relief must extend only to those minority groups for which there is evidence of discrimination.⁹⁹

Inherent in the above discussion is the notion that MBE/WBE Programs and remedies must maintain flexibility regarding local conditions in the public and private sectors. Courts have suggested project-by-project goal setting and waiver provisions as means of ensuring fairness to all vendors.

Finally, “review” or “sunset” provisions are strongly suggested components for an MBE/WBE program to guarantee that remedies do not out-live their intended remedial purpose. As an example, the Sixth Circuit specifically cited the lack of a “sunset” provision in criticizing the MBEA instituted by the State of Ohio.¹⁰⁰

⁹⁸ 214 F.3d 739.

⁹⁹ 214 F.3d at 735 (discussing the need for a “fit” between past/present harm and the proffered remedy).

¹⁰⁰ Drabik, 214 F.3d at 739.

Appendix B
Data Assessment Report

APPENDIX B - DATA ASSESSMENT REPORT

Griffin & Strong, P.C. (“GSPC”) conducted a data assessment meeting on October 29th, 2018 regarding the City of Chattanooga (“City”) 2019 Disparity Study. This report summarizes that meeting and sets forth action items and preliminary questions to be answered. It is necessary to issue a data assessment report prior to completing the data collection plan to confirm that GSPC has the correct understanding of how and where data is kept by City.

I. Scope Statement

The purpose of this engagement is to conduct a complete legal analysis, including a full and comprehensive disparity study (“Study”) to determine whether there is a need to create programs and/or modify existing procurement activities to ensure fairness and diversity in City of Chattanooga procurement. Specifically, the Study will report on the current market availability and utilization of Minority and Females Businesses Enterprises (collectively “M/WBE”).

The Study will collect and analyze relevant data on “ready, willing and able” vendors in the areas of:

- A. Construction
- B. Architecture and Engineering (“A/E”)
- C. Professional Services
- D. Other Services
- E. Goods

The dollars spent with these same types of businesses (whether as prime contractors or subcontractors) will be collected and analyzed.

The study period for the disparity study has been determined as a five-year study period from July 1, 2013 through June 30th, 2018 (7/1/2013 – 6/30/2018) (“Study Period”)

II. Data Assessment Meeting

GSPC conducted a data assessment meeting to ascertain the location, types, and constraints on the data needed for the disparity study, as well as to obtain a basic understanding of the City’s purchasing practices. GSPC met with the following personnel:

Maura Sullivan – Chief Operating Officer
 Anthony Sammons – Deputy Chief Operating Officer
 Phillip Noblett – City Attorney
 Harolda Bryson – Deputy Chief Operating Officer
 James McKissic – Director Office of Multicultural Affairs
 Bonnie Woodward – Purchasing Director
 Debbie Talley – Deputy Purchasing Director
 Ellen Wentworth – Supplier Engagement Coordinator
 Demetria Patton - Freedom of Information Act Coordinator
 Antonia Morgan - Title VI Coordinator
 Daisy Madison - Chief Financial Officer
 Representatives of the City’s IT Department

Along with GSPC’s Study Team:

Rodney K. Strong – CEO and Project Executive

Michele Clark Jenkins – Sr. Director, Consulting Group & Project Oversight
Sterling Johnson – Director of Public Policy & Project Manager

III. Preliminary Purchasing Practices

The City has a centralized procurement process with an overall annual spend at approximately \$281 million in FY18. Every City department is slated to be included in the study, including hybrid City and County agencies where the City does full procurement for the entity (e.g. Air Pollution Control Bureau, which is City and County funded).

A. Purchasing Levels

1. P-Cards are issued and managed within departments. Usage is generally limited to purchases up to \$1,000.00 although some departments have higher limits. Anything over this threshold would be submitted to purchasing. P-Card purchases will not be included in the study.
2. Informal contract thresholds are established between \$1,001 – 24,999.99. Contracts within this threshold are discretionary and only requires a quote for services. Formal contract thresholds are established at any contract valued over \$25,000. Contracts under \$1,000 will not be included in the study for analysis.
3. All RFPs or RFQs over \$25,000 must be approved by City Council.

B. Prequalification

The City does not have a prequalification process unless requested by the Tennessee Department of Transportation. This does not happen often but in the last year they had two procurements which requested letters of intent.

City also engages in some Job Order Contracting (“JOC”) through the Transportation department that operates more as blanket contracts. With Transportation has autonomy to exercise the use of JOCs independent from Purchasing, the original solicitation is procured through Purchasing and data is maintained in record.

C. SBE/DBE Program

City offers its own DBE certification but only began certifying firms in the past 6 months. This certification includes M/WBEs, Service-Disabled Veteran owned Businesses (“SDVOB”) and other Disadvantaged Business Enterprises (“DBE”). All vendor ethnicities are self-reported, and the program does not have any revenue or net worth caps. The City also accepts third party certifications, allowing vendors to identify and upload certificates from third parties in the registration process.

IV. Data Assessment

A. General Data

City has a totally centralized procurement system using Oracle eBiz. Vendors register separately through online platform but are not required to register as a vendor to bid. All City departments will be part of the Study. The City follows the State of Tennessee procurement regulations but has home rule authority and is not restricted to stringently follow state regulations. The City does not consistently monitor subcontractor utilization. City may also piggyback on State of Tennessee contracts without separate procurement. Oracle eBiz system went Citywide in 2008 and integration was completed by 2010. All vendor payments for the study period should be included for this project.

User departments first generate a requisition that will go to purchasing. This requisition includes designation of the NIGP code used for the service. This requisition then either turns into a solicitation or purchase order based on whether the bid is formal or informal. The eventual awarded purchase order will include this information, including the total award amount. Construction is generally done in the same process except that the PO is generated at award. Purchase orders will show the total amount approved by council and can be found in Oracle eBiz.

The City does also have some annual contracts and blanket contracts used by individual departments, but these original solicitations come through Purchasing. The City estimates that there are about 500 blanket contracts where they put in POs against the total amount awarded. These contracts have a contract number which can be used to identify them in the analysis. This contract number will include a six-digit number plus a dash and two additional numbers (e.g. XXXXXX – XX) that will identify blanket agreements. Included in these blanket agreements are On-Call contracts, which are usually 12-month contracts with two subsequent 12-month renewals. According to the City these contracts are mostly for wastewater treatment, plumbing, engineers, architects and attorneys. Purchase orders will also demonstrate the total amount approved by council and the total number of contractors who were awarded the On-Call agreement.

GSPC should be able to pull Oracle data, including reports, solicitations and inquiries remotely. GSPC will need to submit an oracle maintenance request form to the City. GSPC will receive the request form from Debbie Talley and Bonnie Woodward in Purchasing. All data requests should be submitted through Anthony Sammons. If any supplemental requests need to be made, GSPC will provide the upload information for all data bases provided to be uploaded.

B. Analysis

1. Availability

Vendors are not required to registers to bid on City contracts. Registration is required for apparent winners for entry into the Oracle payment system. City maintains its own certified vendor list. Firms should be included in the database with a column that indicate certified and uncertified and the data source.

2. Anecdotal

GSPC will worked with the City's Department of Multicultural Affairs to create a stakeholder list. The City Compliance Officer is housed within the City Attorney's office and handles all complaints regarding discriminatory behavior. Department of Multicultural Affairs has also received complaints from vendors.

C. Specific Data files

It was determined in this meeting that GSPC will need from City:

- List of Solicitations– (issued during the Study Period)
- Vendor list (current)
- Awards (during Study Period)
- P.O's (during the Study Period)
- Payments (during Study Period)
- Contracts (during Study Period)
- Certified DBE list (current)

While bidders and subcontractors would traditionally be requested by GSPC, the City has inconsistently kept Bidder data and Bid Tabs. This is largely up to the individual buyer and how they chose to keep their bidder data. If it is available, it could be found either in hard copy, Excel files, or Google Sheets (which City transitioned to using five years ago). This data has also been inconsistently formatted.

The City is required to keep subcontractor data, but it has not actively tracked subcontractor utilization and does not report on subcontractor utilization.

1. Solicitations

All City solicitations are kept in the Oracle system and online on the City website in the event vendors are not registered. All formal contract opportunities (over \$25,000) can be found on the City website. Solicitations are tied to NIGP commodity codes, which are generated at solicitation. The solicitation number is automatically generated by the Oracle system. Some solicitations are also kept by the Chattanooga Development Resource Corporation (“CDRA”), a consortium which acts as a clearinghouse where they obtain quotes from other vendors. The Solicitation/Requisition and PO numbers are not all related and will not all be held in oracle, but the list of formal and information solicitations and Purchase Order data should be linked for the Study. GSPC will narrow in on POs and Solicitations. On Call contracts are solicited as RFQs.

2. Vendor List

Vendors are not required to register to bid but register through Oracle E-Business platform. The vendor registration process is automated, outward facing and self-serviced. The list is internally kept by Purchasing. This list should have addresses, race/ethnicity and gender broadly identified.

Prior to 2015, all vendor data was kept manually. Vendors are only required to enter the system once and the internal system has name match features to ensure vendors are not repeatedly entered under different names. Vendors are not required or prompted to update their information in the internal system, but vendor's must be registered in the Oracle system to receive payments. This may assist the City in keeping vendor data current.

This vendor list is outward facing and is self-service online. Vendors are prompted to register under NIGP codes in Oracle, but do not have to identify a primary code. While vendors can choose from multiple codes to register, the City system does encourage them to tailor their registration to registration under areas where vendors provide services. Originating departments generate NIGP codes associated with requisitions, so the City cannot verify the accuracy of NIGP codes to services.

Over the course of the study, GSPC found that, while the system prompted vendors to select NIGP codes, codes were not required for vendors leading to significant gaps in the number of vendors who had registered under accurate commodity codes. For availability, GSPC ultimately included the firms with codes, used the NIGP codes generated from requisitions, and word descriptions from firm names or services provided to

properly align vendors with accurate work codes. Furthermore, several vendors registered for hundreds of commodity codes across a variety of types of services. Without having a primary work code identified, GSPC was unable to isolate the type of work that the firm provided. These firms were excluded from the final analysis.

3. Awards

Contract awards should be reflected through Oracle system and mixture of payment data (including P.O. data). Data can be accessed through Oracle by having GSPC return the Oracle maintenance form. Oracle data should also include solicitations and any change orders,

The City does not actively engage in third party procurement agreements but does do some piggyback contracting. Through CDRC, which acts as a middleman, the City can obtain quotes from other vendors under blanket contracts. Included under blanket agreements are On-Call contracts, which are regularly 12-month contracts with two additional one-year renewals. Piggyback contracts should reflect as prime contracts.

The City does not regularly engage in Construction Manager at Risk (CMAR) contracts, noting that there has only been one in the entire career of both the Purchasing Director and Deputy.

4. Purchase Orders (P.O.)

Purchase Orders are created at the time of award and includes the total award amount. This should also identify the solicitation, contract amount and payments to date. All payments should be reflected in purchase orders.

There may be some discrepancies in purchase order amounts and available funds. This should be reconciled in the contract status under “Amount Matched”, which identifies the amount paid against the contract award to date. The contract status will otherwise be identified in the system as “open” or “closed”.

GSPC should make sure it includes the following data fields in its request:

- Solicitation Number
- Start date
- Close date
- Contract Status
- Contract Award
- Amount Matched

Purchase orders should contain the majority of relevant data fields for analysis.

5. Payments

All payments are reflected as purchase orders. This data should be kept in the City Oracle system.

6. Contracts

Contract numbers are separate from PO numbers and solicitation numbers and these three numbers are not connected. In traditional format, these numbers will be six-digit numbers.

7. Bidders

Bidder data has been inconsistently kept by the City over the study period. They have been kept in hard

copy, written in the buyer's individual files. Bid tabulations have also been kept both in Excel data and in Google Sheets, which is currently being used. City has not been stringent on requiring maintenance of bidder data and it may, or may not, be available. Bidder data has also been inconsistently formatted as the buyer decides how to maintain their individual bid tabs. All bidders listed under hard bid construction documents are submitted separately at the time of bid. Bidders are not required to register as vendors.

8. Subcontractors

City has not consistently kept track of subcontractor data and does not engage in active compliance, choosing instead to allow the subcontractor and prime contractor to mediate as appropriate. The City does no reporting on subcontractor utilization.

9. Certified MWBE/DBE list

The City only recently began maintaining and tracking certified M/WBE, DBE and SDVOB vendors. This process is primarily overseen by the Department of Multicultural Affairs. Vendors can self-certify through the vendor registration process and provide supporting documents if needed. As currently constructed, the City does also accept third party certifications in verifying applicants.

Appendix C Data Collection Plan

APPENDIX C – DATA COLLECTION PLAN

**City of Chattanooga
DATA COLLECTION
PLAN**

The data collection plan utilizes the information gathered in the Data Assessment Report and sets forth a preliminary plan for actual retrieval of the data.

A. Collect Electronic Data

Assigned	Task	Start	Finish	Completed
SJJ/MCJ	Submit request for electronic data, including the following to: Anthony Sammons and Maura Sullivan 1. Oracle System Access 2. City of Chattanooga Contract Solicitations (7/1/2013 – 6/30/2018) 3. Chattanooga Development Resource Corporation (NDRC) Contract Solicitation List (7/1/2013 – 6/30/2018) 4. City of Chattanooga DBE certification list (current) 5. City of Chattanooga Purchase Orders (7/1/2013 – 6/30/2018) 6. Payments (7/1/2013 – 6/30/2018) (HOLD) 7. Contracts (7/1/2013 – 6/30/2018) 8. City of Chattanooga Registered Vendors (current) 9. Work code keys and descriptions.	11/12/2018	1/22/2019	
	ALL ELECTRONIC DATA COLLECTED			

B. Collect Manual Data

Assigned	Task	Start	Finish	Completed
SJJ/MCJ	No known manual data (subject to revision)	N/A	N/A	
	ALL MANUAL DATA COLLECTED		N/A	

C. Survey of Business Owners

Assigned	Task	Start	Finish	Completed
SJJ/GP/MCJ/Creative Research Solutions, LLC	Prepare questions for Survey of Business Owners	11/12/2018	12/30/2018	
SJJ/MCJ/OB	Obtain City’s current data files (Vendors lists and contacts)	11/12/2018	12/21/2018	
MCJ/SJJ/OB	Clean data files	12/18/2018	1/14/2019	

CITY OF CHATTANOOGA 2019 DISPARITY STUDY

Creative Research Solutions, LLC	Send questions and datafiles to Creative Research Solutions, LLC to conduct the online survey	1/14/2019	2/14/2019	
	ALL SURVEY TABLES RECEIVED BY GSPC		2/28/2019	

D. Purchasing Practices, Policies & Procedures Interviews

Assigned	Task	Start	Finish	Completed
JVE	Contact Purchasing buyers and departments to make appoints to be interviewed	11/7/2018	11/7/18	
JVE	Conduct policy interviews with the various departments that conduct procurements	11/7/2018	11/21/18	
JVE	Complete draft of Policy Chapter	11/7/2018	12/12/18	
	PURCHASING PRACTICES INTERVIEWS COMPLETED		12/12/18	

E. Anecdotal Evidence

Assigned	Task	Start	Finish	Completed
SJJ/MCJ	Stakeholder List	10/31/2018	10/31/2018	
SJJ/DS	Set up in-person interviews with Organizations	11/7/2018	2/15/2019	
SJJ/DS	Conduct interviews using a script but receiving information not on script as well (interviews are recorded) and write up summary of interviews, particularly documenting any accounts of marketplace discrimination	11/12/2019	3/1/2019	
SJJ	Conduct public hearings & focus group	TBD	3/29/19	
	ANECDOTAL EVIDENCE COLLECTED		4/12/19	

F. Private Sector Analysis

Assigned	Task	Start	Finish	Completed
Price	Collect publicly available data e.g. census and economic data as useful	2/15/2019	6/7/2019	
	PRIVATE SECTOR DATA COLLECTED		6/17/2019	

G. External Data

Assigned	Task	Start	Finish	Completed
SJJ	Obtain electronic vendor data from State of Tennessee, TNUCP, GoDBE, Metro Nashville Vendor List, TNDOT, SBA	10/29/2018	11/16/2018	

CITY OF CHATTANOOGA 2019 DISPARITY STUDY

	and others			
	EXTERNAL DATA COLLECTED		12/31/2018	

Personnel Assigned Key

RKS – Rodney K. Strong, CEO and Project
Executive

MCJ – Michele Clark Jenkins, Sr. Director and
Project Oversight

SJJ-Sterling Johnson, Director of Public Policy
and Project Manager

OB – Omar Baig, Data Analyst

SGJ-Susan Johnson, Project Administrator

JVE-Vince Eagan, Policy Analyst

GP-Dr. Gregory Price, Senior Economist

Creative Research Solutions- Travis Tatum

Respectfully submitted this 19th day of December 2018

By Sterling J. Johnson
Dir. Of Public Policy
and Project Manager
Griffin & Strong, P.C.

Appendix D
Relevant Market and Spend by County

APPENDIX D – RELEVANT MARKET AND SPEND BY COUNTY

Relevant Market Area – Construction
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$27,592,886.06	11.36%	11.36%
MSA	\$20,777,306.76	8.55%	19.91%
CSA	\$107,245,932.29	44.15%	64.07%
TN	\$8,883,993.79	3.66%	67.72%
KY	\$65,738,601.63	27.06%	94.79%
GA	\$10,089,080.71	4.15%	98.94%
AL	\$392,910.85	0.16%	99.10%
NC	\$294,483.00	0.12%	99.22%
MO	\$1,200.00	0.00%	99.22%
USA	\$1,884,706.42	0.78%	100.00%
Total	\$242,901,101.51	100.00%	

Relevant Market Area – Professional Services
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$307,516,742.54	84.21%	84.21%
MSA	\$669,433.83	0.18%	84.39%
CSA	\$1,853,686.11	0.51%	84.90%
TN	\$10,766,921.11	2.95%	87.84%
AL	\$4,845,721.86	1.33%	89.17%
GA	\$2,232,014.25	0.61%	89.78%
KY	\$1,402,957.93	0.38%	90.17%
VA	\$770,401.78	0.21%	90.38%
MO	\$301,009.48	0.08%	90.46%
NC	\$221,911.18	0.06%	90.52%
MS	\$34,000.00	0.01%	90.53%
USA	\$34,584,602.26	9.47%	100.00%
Total	\$365,199,402.33	100.00%	

Relevant Market Area – Other Services
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$88,114,596.42	34.58%	34.58%
MSA	\$3,246,363.22	1.27%	35.85%
CSA	\$19,236,333.98	7.55%	43.40%
TN	\$48,151,002.94	18.90%	62.30%
GA	\$37,081,878.37	14.55%	76.85%
KY	\$21,509,362.28	8.44%	85.29%
AR	\$6,827,798.28	2.68%	87.97%
AL	\$2,312,504.54	0.91%	88.88%
VA	\$1,856,452.23	0.73%	89.61%
NC	\$1,260,082.37	0.49%	90.10%
MO	\$35,508.82	0.01%	90.11%
MS	\$20,800.00	0.01%	90.12%
USA	\$25,170,578.46	9.88%	100.00%
Total	\$254,823,261.90	100.00%	

Relevant Market Area – Architecture & Engineering
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$20,873,387.09	82.01%	82.01%
MSA	\$4,700.00	0.02%	82.03%
TN	\$3,361,180.27	13.21%	95.24%
NC	\$696,242.76	2.74%	97.98%
VA	\$130,361.33	0.51%	98.49%
GA	\$36,348.79	0.14%	98.63%
AL	\$14,182.42	0.06%	98.69%
USA	\$334,366.93	1.31%	100.00%
Total	\$25,450,769.59	100.00%	

Relevant Market Area – Goods
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

Relevant Market Region	Total Award Amount	Percent	Cumulative Percent
Hamilton County	\$71,986,308.65	30.27%	30.27%
MSA	\$3,077,636.93	1.29%	31.57%
CSA	\$13,699,126.83	5.76%	37.33%
Surrounding Counties	\$17,000.00	0.01%	37.33%
TN	\$54,162,592.21	22.78%	60.11%
GA	\$9,595,429.27	4.03%	64.14%
AL	\$5,950,765.72	2.50%	66.65%
MS	\$1,797,141.16	0.76%	67.40%
MO	\$1,560,040.63	0.66%	68.06%
KY	\$1,521,324.10	0.64%	68.70%
NC	\$1,422,110.23	0.60%	69.30%
VA	\$513,784.65	0.22%	69.51%
AR	\$37,486.00	0.02%	69.53%
USA	\$72,465,610.69	30.47%	100.00%
Total	\$237,806,357.08	100.00%	

Relevant Market Area – Construction by County
 (Using Prime Award Dollars, FY 2014 – 2018)
 Chattanooga Disparity Study

County, State	Actual Shipment Amount
McMinn County, TN	\$93,004,992.19
Fayette County, KY	\$57,538,569.82
Hamilton County, TN	\$27,592,886.06
Walker County, GA	\$20,751,191.73
Mcminn County, TN	\$10,381,095.68
DeKalb County, GA	\$9,705,097.00
Anderson County, KY	\$8,190,095.81
Williamson County, TN	\$7,588,885.00
Bradley County, TN	\$1,866,102.49
Oakland County, MI	\$1,706,429.68
Polk County, TN	\$1,419,629.87
Knox County, TN	\$919,880.62
Rhea County, TN	\$547,754.07
Crenshaw County, AL	\$392,910.85
Gwinnett County, GA	\$383,983.71
Davidson County, TN	\$373,985.00
Haywood County, NC	\$288,483.00

Spokane County, WA	\$112,961.20
Whitfield County, GA	\$26,358.00
Multnomah County, OR	\$24,500.00
Catoosa County, GA	\$17,315.03
Henderson County, KY	\$9,936.00
Dallas County, TX	\$9,280.00
Marion County, TN	\$8,800.00
Maricopa County, AZ	\$8,320.00
Jefferson County, OH	\$7,500.00
Wake County, NC	\$6,000.00
Cass County, ND	\$5,076.00
Hartford County, CT	\$2,924.16
Hamilton County, IN	\$2,826.08
Duval County, FL	\$1,722.90
Sumter County, SC	\$1,630.40
Cuyahoga County, OH	\$1,536.00
Loudon County, TN	\$1,243.17
Jackson County, MO	\$1,200.00
Total	\$242,901,101.51

Relevant Market Area – Professional Services by County
(Using Prime Award Dollars, FY 2014 – 2018)
Chattanooga Disparity Study

County, State	Actual Shipment Amount
Hamilton County, TN	\$307,516,742.54
Chittenden County, VT	\$11,715,224.00
Davidson County, TN	\$7,748,823.08
Cook County, IL	\$6,942,651.31
Madison County, AL	\$4,635,377.41
Middlesex County, MA	\$3,939,211.80
Oakland County, MI	\$3,056,554.00
DuPage County, IL	\$2,351,848.60
Bradley County, TN	\$1,834,036.11
Williamson County, TN	\$1,297,791.47
Fulton County, GA	\$1,176,400.94
San Diego County, CA	\$1,083,747.11
Shelby County, TN	\$1,074,791.19
Gwinnett County, GA	\$951,141.31
Jefferson County, KY	\$941,547.36
Orange County, FL	\$881,948.20
Travis County, TX	\$809,242.00

Marion County, IN	\$633,302.46
Windsor County, VT	\$484,325.77
Roanoke City, VA	\$483,187.82
Fayette County, KY	\$461,410.57
King County, WA	\$449,289.00
New York County, NY	\$436,549.51
Catoosa County, GA	\$415,204.40
Knox County, TN	\$364,318.87
St. Louis County, MO	\$301,009.48
Jefferson County, AL	\$206,489.45
Dupage County, IL	\$202,838.80
Greenville County, SC	\$175,167.04
San Francisco County, CA	\$159,764.57
Sequatchie County, TN	\$158,995.01
Middlesex County, CT	\$139,753.00
Wake County, NC	\$135,383.05
Fairfax County, VA	\$132,761.00
Wayne County, MI	\$123,954.44
Allegheny County, PA	\$119,608.00
Rutherford County, TN	\$114,947.56
Alexandria city, VA	\$100,000.00
Dane County, WI	\$93,697.83
Washtenaw County, MI	\$85,000.00
Marion County, TN	\$78,745.00
Clark County, IN	\$66,954.55
Dallas County, TX	\$65,643.68
District of Columbia, DC	\$62,021.95
Blount County, TN	\$61,460.00
Robertson County, TN	\$58,210.00
DeKalb County, GA	\$53,945.00
Buncombe County, NC	\$48,294.61
Montgomery County, MD	\$45,427.05
Allen County, IN	\$40,690.16
Fauquier County, VA	\$40,025.00
Hamilton County, OH	\$36,100.13
San Mateo County, CA	\$33,000.00
Madison County, MS	\$30,000.00
Cobb County, GA	\$27,227.00
Bexar County, TX	\$25,126.42
Baltimore City, MD	\$24,950.00
Kings County, NY	\$24,000.00
Sheridan County, WY	\$21,922.06
Orange County, CA	\$20,330.31

Palm Beach County, FL	\$19,128.00
Rockingham County, NC	\$19,013.98
Will County, IL	\$18,570.96
Rhea County, TN	\$18,000.00
Walker County, GA	\$16,489.42
Kane County, IL	\$16,180.16
Los Angeles County, CA	\$14,680.66
Philadelphia County, PA	\$11,339.93
Forsyth County, NC	\$11,210.00
Bucks County, PA	\$10,956.35
Union County, TN	\$10,775.00
Hampden County, MA	\$10,749.60
Sullivan County, TN	\$10,500.00
Johnson County, KS	\$10,382.05
Charlottesville city, VA	\$9,977.96
Sacramento County, CA	\$9,750.00
Salt Lake County, UT	\$9,425.00
Pickens County, SC	\$8,498.92
Manatee County, FL	\$8,425.00
Bibb County, GA	\$8,125.00
Fairfield County, CT	\$8,000.00
Baltimore city, MD	\$8,000.00
Placer County, CA	\$5,970.00
Benton County, TN	\$5,930.00
Marion County, OH	\$5,709.00
Onondaga County, NY	\$5,400.00
Lee County, FL	\$5,338.00
San Bernardino County, CA	\$5,300.00
Forsyth County, GA	\$5,250.00
Franklin County, OH	\$5,200.00
Coffee County, TN	\$4,851.00
Wilson County, TN	\$4,522.00
Mecklenburg County, NC	\$4,509.54
Stafford County, VA	\$4,450.00
Franklin County, TN	\$4,245.95
Sonoma County, CA	\$4,110.69
Copiah County, MS	\$4,000.00
St. Clair County, AL	\$3,855.00
Floyd County, GA	\$3,600.00
Washington County, RI	\$3,500.00
Cabarrus County, NC	\$3,500.00
Washington County, TN	\$3,405.00
Pinal County, AZ	\$2,985.00

Utah County, UT	\$2,375.35
Loudon County, TN	\$2,350.00
Warrick County, IN	\$2,280.00
Henry County, GA	\$2,250.00
Frederick County, MD	\$2,250.00
Wilkes County, GA	\$2,000.00
Maricopa County, AZ	\$1,899.00
Morris County, NJ	\$1,895.00
Butler County, OH	\$1,869.00
Harris County, TX	\$1,765.00
Hillsborough County, FL	\$1,750.00
McMinn County, TN	\$1,650.00
Lake County, IL	\$1,546.00
Chester County, PA	\$1,541.40
Suffolk County, MA	\$1,500.00
Alameda County, CA	\$1,397.00
Lycoming County, PA	\$1,371.25
Dorchester County, SC	\$1,275.83
Cuyahoga County, OH	\$1,224.50
Norfolk County, MA	\$1,219.86
Paulding County, GA	\$1,075.00
Dekalb County, GA	\$1,000.00
Total	\$365,199,402.33

Relevant Market Area – Other Services by County

(Using Prime Award Dollars, FY 2014 – 2018)

Chattanooga Disparity Study

County, State	Actual Shipment Amount
Hamilton County, TN	\$88,114,596.42
DeKalb County, GA	\$20,457,274.44
Bradley County, TN	\$17,226,292.33
Davidson County, TN	\$15,885,520.35
Fayette County, KY	\$14,619,494.96
Troup County, GA	\$11,360,439.15
Putnam County, TN	\$8,319,252.88
Pope County, AR	\$6,820,598.30
Anderson County, KY	\$6,328,941.06
Rutherford County, TN	\$5,963,156.80
Pasco County, FL	\$5,382,091.00
Sumner County, TN	\$4,923,861.27
Fulton County, GA	\$4,590,262.11
Williamson County, TN	\$4,215,986.25

Knox County, TN	\$3,851,880.90
Overton County, TN	\$2,481,514.45
Hillsborough County, FL	\$1,971,844.22
Walker County, GA	\$1,903,393.03
Collin County, TX	\$1,894,624.72
McMinn County, TN	\$1,786,695.75
Orleans Parish, LA	\$1,745,480.75
Dallas County, TX	\$1,681,823.53
DeKalb County, AL	\$1,383,142.58
Orange County, FL	\$1,317,417.15
Virginia Beach city, VA	\$1,056,764.01
Cook County, IL	\$941,769.64
Boulder County, CO	\$938,765.48
Jefferson County, AL	\$843,443.79
Catoosa County, GA	\$836,282.72
Bedford County, TN	\$824,086.79
Lycoming County, PA	\$673,475.00
Philadelphia County, PA	\$630,645.05
Mesa County, CO	\$608,180.00
King County, WA	\$536,975.52
Monroe County, NY	\$511,358.87
Graham County, NC	\$487,460.00
Graves County, KY	\$468,643.05
Ramsey County, MN	\$405,143.00
San Francisco County, CA	\$395,072.56
Mecklenburg County, NC	\$375,380.63
Harris County, TX	\$367,827.67
Washington County, TN	\$357,732.07
Lewis County, TN	\$354,088.34
Niagara County, NY	\$328,504.70
Fairfax County, VA	\$324,078.48
Anderson County, TN	\$308,485.86
Orange County, CA	\$299,164.06
Lubbock County, TX	\$288,011.53
Galax city, VA	\$284,620.14
Franklin County, TN	\$262,966.51
Sequatchie County, TN	\$250,356.32
Maricopa County, AZ	\$247,056.56
Polk County, IA	\$226,723.00
Bay County, MI	\$226,021.88
Fort Bend County, TX	\$217,855.00
Gwinnett County, GA	\$195,694.15
Chatham County, NC	\$189,840.00

Los Angeles County, CA	\$184,082.99
Allegheny County, PA	\$171,672.15
Pickens County, SC	\$170,018.40
District of Columbia, DC	\$165,983.94
Lehigh County, PA	\$160,515.57
Whitfield County, GA	\$159,746.32
Dade County, GA	\$159,204.15
Cobb County, GA	\$158,853.21
Brunswick County, VA	\$148,865.00
Shelby County, TN	\$137,627.00
Marion County, IN	\$134,085.48
Chittenden County, VT	\$117,962.98
San Diego County, CA	\$117,113.68
Bibb County, GA	\$115,389.05
Passaic County, NJ	\$109,984.00
Onondaga County, NY	\$109,931.72
Coweta County, GA	\$105,322.00
Larimer County, CO	\$104,759.40
Fairfield County, CT	\$103,223.84
Marion County, TN	\$97,127.00
Forsyth County, NC	\$96,323.25
Albany County, NY	\$94,413.24
Lincoln County, TN	\$77,301.00
Alameda County, CA	\$77,213.00
Hennepin County, MN	\$76,570.26
Palm Beach County, FL	\$76,488.00
Madison County, AL	\$71,228.00
Franklin County, OH	\$69,300.00
Williamson County, TX	\$63,082.66
Leon County, FL	\$59,022.76
Kings County, NY	\$56,740.00
Tarrant County, TX	\$56,510.38
Union County, NC	\$54,943.70
Utah County, UT	\$54,379.57
Lake County, IL	\$51,141.22
Rhea County, TN	\$50,528.58
Maury County, TN	\$48,271.35
Loudon County, TN	\$46,351.95
Floyd County, GA	\$45,137.32
Contra Costa County, CA	\$44,291.00
Middlesex County, MA	\$43,917.02
Dubois County, IN	\$40,408.28
Santa Clara County, CA	\$40,028.00

Bell County, KY	\$36,420.00
Blount County, TN	\$36,225.00
Monmouth County, NJ	\$33,080.00
Story County, IA	\$28,212.00
Snohomish County, WA	\$25,440.44
Montgomery County, PA	\$24,999.00
Warren County, TN	\$24,810.50
Chester County, PA	\$24,212.30
Multnomah County, OR	\$23,275.00
Newaygo County, MI	\$22,830.00
Johnson County, KS	\$22,472.87
Warren County, KY	\$21,000.00
Jackson County, MI	\$20,400.50
Norfolk County, MA	\$19,865.34
Bexar County, TX	\$19,508.91
Will County, IL	\$19,170.00
Loudoun County, VA	\$18,624.60
Douglas County, GA	\$18,486.24
Richland County, SC	\$18,000.00
Guilford County, NC	\$17,791.41
Duval County, FL	\$17,740.07
Grenada County, MS	\$17,500.00
Cole County, MO	\$16,500.00
Minnehaha County, SD	\$15,378.29
Riley County, KS	\$14,187.50
St. Louis City, MO	\$14,008.82
Anderson County, SC	\$13,952.78
Kenton County, KY	\$13,714.60
Sacramento County, CA	\$13,665.75
East Baton Rouge Parish, LA	\$13,564.90
Shelby County, AL	\$13,490.17
Seminole County, FL	\$13,133.65
Sevier County, TN	\$13,094.67
Westchester County, NY	\$12,732.69
San Mateo County, CA	\$12,350.00
Sonoma County, CA	\$12,146.69
Salt Lake County, UT	\$11,851.00
New Hanover County, NC	\$11,500.00
Coffee County, TN	\$11,403.00
Charlottesville city, VA	\$11,000.00
Douglas County, NE	\$10,944.00
DuPage County, IL	\$10,885.00
Walton County, GA	\$10,650.00

Cuyahoga County, OH	\$10,447.06
Union County, NJ	\$10,350.00
Kane County, IL	\$9,799.00
Bullitt County, KY	\$9,696.61
Bergen County, NJ	\$9,420.99
Franklin County, PA	\$9,250.00
Jackson County, AL	\$9,071.00
Gaston County, NC	\$9,069.00
Denver County, CO	\$8,850.00
Tulsa County, OK	\$8,592.30
Lancaster County, PA	\$8,275.00
Dupage County, IL	\$8,217.00
Morris County, NJ	\$8,063.26
Miami County, OH	\$8,055.60
Hall County, GA	\$7,910.00
Floyd County, VA	\$7,500.00
Saline County, AR	\$7,199.98
Vilas County, WI	\$7,045.20
Wilson County, TN	\$6,386.00
Warren County, OH	\$6,336.00
Baltimore County, MD	\$6,317.82
Grayson County, KY	\$6,305.00
Pierce County, WI	\$6,270.00
Barnstable County, MA	\$6,210.00
Brevard County, FL	\$6,185.18
Jefferson County, CO	\$6,074.92
Wyandotte County, KS	\$6,000.00
New York County, NY	\$5,743.14
Dakota County, MN	\$5,654.00
Riverside County, CA	\$5,405.00
Oklahoma County, OK	\$5,287.33
Prince George's County, MD	\$5,260.00
Middlesex County, CT	\$5,256.00
St. Johns County, FL	\$5,201.40
Cape Girardeau County, MO	\$5,000.00
Heard County, GA	\$5,000.00
Volusia County, FL	\$5,000.00
Santa Fe County, NM	\$5,000.00
Buncombe County, NC	\$5,000.00
Albemarle County, VA	\$5,000.00
Litchfield County, CT	\$5,000.00
Spartanburg County, SC	\$5,000.00
Sarasota County, FL	\$5,000.00

Napa County, CA	\$5,000.00
Pitt County, NC	\$5,000.00
Sedgwick County, KS	\$4,739.00
Hamilton County, IN	\$4,613.69
Wake County, NC	\$4,511.25
Clermont County, OH	\$4,480.00
Dane County, WI	\$4,080.00
Polk County, TN	\$4,000.00
Milwaukee County, WI	\$3,962.50
Muscogee County, GA	\$3,932.50
Horry County, SC	\$3,875.36
Fresno County, CA	\$3,843.00
Gordon County, GA	\$3,809.00
Fayette County, GA	\$3,719.20
Jefferson County, KY	\$3,647.00
Pinellas County, FL	\$3,228.00
Dauphin County, PA	\$3,105.50
Randolph County, IL	\$2,853.43
Deschutes County, OR	\$2,823.54
Josephine County, OR	\$2,736.65
Travis County, TX	\$2,602.50
Missoula County, MT	\$2,550.00
Winona County, MN	\$2,390.00
Cumberland County, PA	\$2,250.00
Camden County, NJ	\$2,231.84
Crawford County, KS	\$2,198.02
Rockingham County, NH	\$2,196.00
Winnebago County, WI	\$2,152.10
Greenville County, SC	\$2,000.00
Pima County, AZ	\$2,000.00
Austin County, TX	\$2,000.00
Miami-Dade County, FL	\$2,000.00
Oneida County, NY	\$2,000.00
Ingham County, MI	\$1,975.00
Lee County, MS	\$1,800.00
Hartford County, CT	\$1,796.54
La Plata County, CO	\$1,765.00
Orange County, NC	\$1,719.78
Arapahoe County, CO	\$1,700.00
Burlington County, NJ	\$1,550.00
Wayne County, NC	\$1,543.35
Lamar County, MS	\$1,500.00
Isabella County, MI	\$1,500.00

Boyle County, KY	\$1,500.00
Allen County, IN	\$1,475.00
Eau Claire County, WI	\$1,299.00
Talladega County, AL	\$1,200.00
Lamoille County, VT	\$1,160.00
Steele County, MN	\$1,112.50
Kanawha County, WV	\$1,099.00
Kitsap County, WA	\$1,000.00
Gibson County, TN	\$1,000.00
Total	\$254,823,261.90

Relevant Market Area – Architecture & Engineering by County
(Using Prime Award Dollars, FY 2014 – 2018)
Chattanooga Disparity Study

County, State	Actual Shipment Amount
Hamilton County, TN	\$20,873,387.09
Davidson County, TN	\$2,333,277.60
Knox County, TN	\$948,730.00
Mecklenburg County, NC	\$696,242.76
Johnson County, KS	\$227,275.63
Roanoke City, VA	\$119,324.00
Franklin County, PA	\$68,131.00
Shelby County, TN	\$48,200.72
DeKalb County, GA	\$29,085.00
Rutherford County, TN	\$19,900.00
Mobile County, AL	\$12,132.42
Story County, IA	\$11,810.54
Richmond City, VA	\$11,037.33
Duval County, FL	\$10,000.00
Williamson County, TN	\$6,800.00
Gwinnett County, GA	\$4,863.79
San Bernardino County, CA	\$4,535.46
Franklin County, TN	\$4,271.95
Catoosa County, GA	\$3,500.00
Bucks County, PA	\$3,425.00
Cook County, IL	\$3,240.00
Multnomah County, OR	\$3,000.00
Fulton County, GA	\$2,400.00
Cullman County, AL	\$2,050.00
Ramsey County, MN	\$1,870.00
Marion County, TN	\$1,200.00
Norfolk County, MA	\$1,079.30
Total	\$25,450,769.59

Relevant Market Area – Goods by County

(Using Prime Award Dollars, FY 2014 – 2018)

Chattanooga Disparity Study

County, State	Actual Shipment Amount
Hamilton County, TN	\$71,986,308.65
Knox County, TN	\$33,934,287.97
Lake County, IL	\$28,743,147.42
Davidson County, TN	\$11,900,315.37
Bradley County, TN	\$9,108,025.63
Fulton County, GA	\$5,523,544.57
Whitfield County, GA	\$4,471,955.63
Dodge County, NE	\$4,302,097.00
Maricopa County, AZ	\$3,914,151.97
Wayne County, MI	\$3,473,887.28
Cook County, IL	\$2,515,610.79
Kent County, MI	\$2,489,853.20
Pickens County, SC	\$2,472,449.67
Morgan County, AL	\$1,987,218.84
Miami-Dade County, FL	\$1,973,555.90
Jefferson County, AL	\$1,707,701.30
Clay County, MS	\$1,654,145.03
Williamson County, TN	\$1,576,212.53
Monroe County, TN	\$1,545,416.17
Greenville County, SC	\$1,524,041.98
Cobb County, GA	\$1,506,417.06
Gloucester County, NJ	\$1,496,015.38
Rutherford County, TN	\$1,468,512.04
St. Louis County, MO	\$1,385,618.00
Walker County, GA	\$1,383,005.92
Cullman County, AL	\$1,344,111.73
Gwinnett County, GA	\$1,303,519.33
Orange County, CA	\$1,273,638.45
Putnam County, TN	\$1,263,495.21
Orange County, FL	\$1,193,757.72
Lucas County, OH	\$1,094,929.44
Marion County, TN	\$1,079,030.81
Dallas County, TX	\$1,056,525.87
Shelby County, TN	\$971,034.99
King County, WA	\$886,958.95
Mecklenburg County, NC	\$825,244.03
Blount County, TN	\$820,651.62
Hillsborough County, FL	\$739,299.34

Lubbock County, TX	\$696,004.08
Johnson County, KS	\$623,925.81
Greene County, OH	\$580,314.48
Catoosa County, GA	\$568,714.20
Montgomery County, MD	\$541,248.66
Cuyahoga County, OH	\$524,060.64
Shelby County, AL	\$505,764.34
Kenton County, KY	\$501,438.00
Harris County, TX	\$464,269.23
Los Angeles County, CA	\$438,533.64
Jefferson County, KY	\$436,239.24
Alameda County, CA	\$410,874.93
Lycoming County, PA	\$374,840.50
Fairfax County, VA	\$349,717.54
Prince George's County, MD	\$299,720.47
Williamson County, TX	\$257,577.87
Philadelphia County, PA	\$257,503.48
Travis County, TX	\$247,431.65
Onondaga County, NY	\$244,388.75
Hennepin County, MN	\$239,717.73
Santa Clara County, CA	\$236,191.05
Ramsey County, MN	\$216,679.72
Middlesex County, MA	\$211,987.97
Anoka County, MN	\$202,342.22
Floyd County, GA	\$194,945.00
Douglas County, KS	\$187,536.91
Forsyth County, NC	\$183,689.88
Dane County, WI	\$181,254.35
Floyd County, KY	\$175,556.75
DuPage County, IL	\$174,147.32
Story County, IA	\$168,564.52
Boone County, KY	\$166,963.25
Fairfield County, CT	\$165,127.59
Collin County, TX	\$162,943.76
Troup County, GA	\$153,000.00
Multnomah County, OR	\$152,882.68
Loudon County, TN	\$147,047.40
Tuscaloosa County, AL	\$138,884.40
Dupage County, IL	\$138,092.46
DeKalb County, GA	\$136,087.93
Kings County, NY	\$129,440.43
Montgomery County, AL	\$125,215.00
Baltimore City, MD	\$124,136.00

Mesa County, CO	\$123,538.00
Forsyth County, GA	\$119,861.00
Warren County, TN	\$119,508.00
Liberty County, GA	\$118,772.00
Monmouth County, NJ	\$118,030.23
Tom Green County, TX	\$116,998.53
Oklahoma County, OK	\$115,787.55
Iredell County, NC	\$115,632.89
Ascension Parish, LA	\$111,842.00
Muscogee County, GA	\$110,269.25
Orange County, NY	\$107,723.40
DeKalb County, AL	\$106,074.20
Seminole County, FL	\$105,540.51
Chester County, PA	\$103,565.27
San Diego County, CA	\$103,275.99
Maury County, TN	\$103,036.40
New York County, NY	\$102,702.72
Norfolk County, MA	\$101,159.65
Fresno County, CA	\$101,104.00
Graves County, KY	\$98,944.07
Sunflower County, MS	\$89,659.00
McMinn County, TN	\$87,630.39
Douglas County, GA	\$85,792.46
Davidson County, NC	\$85,465.78
Kanawha County, WV	\$84,160.90
Jefferson County, CO	\$81,888.80
Moore County, NC	\$81,591.10
Grays Harbor County, WA	\$81,578.00
Bartow County, GA	\$76,999.78
Benton County, OR	\$76,724.00
Tarrant County, TX	\$76,329.36
Hall County, GA	\$75,957.40
Monroe County, PA	\$75,951.40
Richmond County, GA	\$75,441.60
Allen County, IN	\$71,059.45
Pinellas County, FL	\$67,614.88
District of Columbia, DC	\$65,364.83
Camden County, NJ	\$62,239.05
Butler County, PA	\$62,229.75
Lehigh County, PA	\$60,575.00
San Francisco County, CA	\$60,338.04
Virginia Beach city, VA	\$60,088.08
Sumner County, TN	\$59,813.00

Rockland County, NY	\$59,698.00
Christian County, IL	\$59,270.47
Bullitt County, KY	\$56,781.41
Kalamazoo County, MI	\$56,374.90
Hamilton County, OH	\$53,570.27
Macomb County, MI	\$52,011.95
St. Louis City, MO	\$51,980.00
Allegheny County, PA	\$51,021.84
Brunswick County, VA	\$49,996.68
Milwaukee County, WI	\$49,753.06
Anderson County, TN	\$49,148.00
Fayette County, KY	\$49,030.72
Baltimore County, MD	\$48,606.37
Kern County, CA	\$48,116.79
Delaware County, PA	\$48,020.60
Monroe County, NY	\$47,357.60
Sequatchie County, TN	\$46,886.00
Dakota County, MN	\$46,760.74
Contra Costa County, CA	\$46,740.25
Suffolk County, NY	\$44,008.75
Randolph County, IL	\$43,967.48
Windham County, VT	\$43,890.00
Ulster County, NY	\$43,740.00
Madison County, MS	\$42,199.95
Windsor County, VT	\$39,945.20
Strafford County, NH	\$38,378.00
Dickson County, TN	\$37,985.14
Oakland County, MI	\$37,404.00
St. Louis city, MO	\$37,247.97
Wake County, NC	\$36,376.79
Cumberland County, ME	\$36,265.58
Clarke County, GA	\$35,547.00
New London County, CT	\$35,273.81
Marshall County, TN	\$34,807.00
Jefferson County, OH	\$34,200.00
Marion County, IN	\$33,480.00
Hartford County, CT	\$33,092.54
Union County, NJ	\$32,959.94
Santa Barbara County, CA	\$31,735.00
Jasper County, MO	\$31,382.92
Franklin County, TN	\$31,308.00
Riverside County, CA	\$31,240.49
Indian River County, FL	\$29,632.11

Sonoma County, CA	\$29,301.40
Crittenden County, AR	\$28,486.00
Bergen County, NJ	\$28,410.72
Wayne County, NY	\$28,182.00
Warren County, NJ	\$27,289.63
Winnebago County, WI	\$26,892.22
Placer County, CA	\$26,753.98
Newton County, GA	\$25,286.19
Coffee County, TN	\$24,732.10
Waukesha County, WI	\$24,661.80
Anderson County, SC	\$24,646.74
Essex County, MA	\$24,263.00
Albany County, NY	\$23,963.76
Clay County, MO	\$22,931.72
Tulsa County, OK	\$22,814.37
Kenosha County, WI	\$22,795.29
Howard County, MD	\$22,572.40
Butler County, OH	\$22,189.95
Grundy County, IL	\$22,000.94
Lancaster County, NE	\$21,758.00
Brevard County, FL	\$21,422.78
Frederick County, MD	\$21,408.00
Alamance County, NC	\$21,340.00
Buncombe County, NC	\$20,802.00
Jessamine County, KY	\$20,100.00
Alexandria city, VA	\$20,011.80
Ashtabula County, OH	\$19,044.00
Morris County, NJ	\$18,144.21
Steele County, MN	\$17,944.40
Dyer County, TN	\$17,744.00
Meigs County, TN	\$17,000.00
East Baton Rouge Parish, LA	\$16,900.00
Baldwin County, AL	\$16,798.60
Washington County, OR	\$16,322.34
Utah County, UT	\$16,045.42
Lee County, FL	\$16,011.00
Palm Beach County, FL	\$15,708.43
Denton County, TX	\$15,689.68
Chatham County, NC	\$15,664.49
Sarpy County, NE	\$15,355.95
Beaufort County, SC	\$15,330.63
Pottawattamie County, IA	\$15,103.20
Coweta County, GA	\$15,017.82

Lane County, OR	\$14,894.26
Jackson County, AL	\$14,738.19
LaPorte County, IN	\$14,370.84
Chesterfield County, VA	\$13,909.54
Sullivan County, TN	\$13,736.28
Claiborne County, TN	\$13,610.45
Dubois County, IN	\$13,317.94
York County, SC	\$12,708.76
Weber County, UT	\$12,398.50
Cherokee County, GA	\$12,266.04
Winona County, MN	\$12,089.88
Payne County, OK	\$12,026.00
Clark County, NV	\$12,000.00
Vanderburgh County, IN	\$11,520.00
Warren County, OH	\$11,497.14
Westchester County, NY	\$11,342.84
Polk County, IA	\$11,139.00
St. Clair County, IL	\$11,125.00
Butler County, AL	\$10,792.86
Jackson County, MO	\$10,775.58
Richland County, SC	\$10,690.18
Sevier County, TN	\$10,641.38
Jefferson Parish, LA	\$10,514.80
Franklin County, NC	\$10,487.75
Sacramento County, CA	\$10,420.30
Greene County, MO	\$10,232.44
Rhea County, TN	\$10,177.00
Overton County, TN	\$10,042.16
Macon County, IL	\$9,990.00
Salt Lake County, UT	\$9,937.59
Emmet County, MI	\$9,880.80
York County, VA	\$9,876.01
Scott County, MO	\$9,872.00
Berkeley County, SC	\$9,736.65
Duval County, FL	\$9,675.82
New Haven County, CT	\$9,593.70
Burke County, NC	\$9,384.00
Denver County, CO	\$9,266.00
Sebastian County, AR	\$9,000.00
Arlington County, VA	\$8,985.00
Clark County, IN	\$8,831.00
Grayson County, KY	\$8,631.00
St. Croix County, WI	\$8,410.39

Sedgwick County, KS	\$8,014.27
McLeod County, MN	\$7,926.00
Bexar County, TX	\$7,850.25
Dubuque County, IA	\$7,500.00
Mahoning County, OH	\$7,484.00
Guilford County, NC	\$7,422.52
Kane County, IL	\$7,352.03
Clackamas County, OR	\$7,298.25
Washington County, RI	\$7,200.00
Boulder County, CO	\$6,615.00
Jackson County, GA	\$6,600.00
Pierce County, WA	\$6,546.00
Blair County, PA	\$6,510.05
Lincoln County, TN	\$6,303.00
La Plata County, CO	\$6,000.00
Sullivan County, NY	\$5,626.92
Montgomery County, PA	\$5,535.90
Union County, NC	\$5,268.00
Monterey County, CA	\$5,162.00
Carroll County, GA	\$5,100.00
Walton County, GA	\$5,062.00
Stark County, OH	\$5,030.10
Cayuga County, NY	\$4,815.00
Carroll County, IA	\$4,729.25
Neshoba County, MS	\$4,705.00
Dekalb County, GA	\$4,690.07
Hudson County, NJ	\$4,464.00
Sarasota County, FL	\$4,450.93
St. Tammany Parish, LA	\$4,353.00
Missoula County, MT	\$4,245.00
Leon County, FL	\$3,940.00
Jefferson County, WI	\$3,938.07
Madison County, OH	\$3,908.00
Calloway County, KY	\$3,879.66
Carroll County, IL	\$3,850.00
Granville County, NC	\$3,741.00
El Paso County, CO	\$3,717.56
Russell County, AL	\$3,706.00
Franklin County, MA	\$3,650.60
Rankin County, MS	\$3,622.38
Snohomish County, WA	\$3,614.00
Carver County, MN	\$3,566.96
Delaware County, OH	\$3,500.00

Hampden County, MA	\$3,355.00
Union County, PA	\$3,346.35
Carroll County, MD	\$3,338.00
Fulton County, OH	\$3,334.66
Vilas County, WI	\$3,298.04
Madison County, AL	\$3,113.50
Washington County, MN	\$3,074.00
Broward County, FL	\$3,042.75
Somerset County, NJ	\$3,040.00
Hocking County, OH	\$3,015.20
Uvalde County, TX	\$3,010.00
Dauphin County, PA	\$3,007.55
Hinds County, MS	\$2,809.80
Paulding County, GA	\$2,699.10
McHenry County, IL	\$2,649.88
Bonner County, ID	\$2,590.00
Richland County, OH	\$2,551.58
Daviess County, KY	\$2,533.00
Macon County, GA	\$2,465.68
Madison County, IN	\$2,436.00
Cabell County, WV	\$2,250.00
Franklin County, OH	\$2,234.88
Crawford County, KS	\$2,059.75
Carroll County, NH	\$2,030.00
Monroe County, GA	\$1,960.00
Outagamie County, WI	\$1,855.84
Westmoreland County, PA	\$1,825.32
Grundy County, TN	\$1,800.00
Fayette County, GA	\$1,799.25
San Luis Obispo County, CA	\$1,790.00
Kootenai County, ID	\$1,748.00
Kitsap County, WA	\$1,690.00
Washtenaw County, MI	\$1,631.54
Taylor County, FL	\$1,605.00
Meriwether County, GA	\$1,528.75
Latah County, ID	\$1,514.90
Leavenworth County, KS	\$1,496.00
Erie County, NY	\$1,483.72
Marion County, FL	\$1,475.00
Centre County, PA	\$1,473.12
Natrona County, WY	\$1,464.75
Northampton County, PA	\$1,452.92
White County, TN	\$1,404.00

Gordon County, GA	\$1,400.00
Hillsborough County, NH	\$1,398.00
Houston County, AL	\$1,384.95
Lackawanna County, PA	\$1,280.36
Whitley County, KY	\$1,227.00
Washington County, PA	\$1,209.60
San Bernardino County, CA	\$1,203.67
Poquoson city, VA	\$1,200.00
Nassau County, NY	\$1,099.84
La Porte County, IN	\$1,034.40
Lorain County, OH	\$1,020.00
Navarro County, TX	\$1,002.00
Total	\$237,806,357.08

Appendix E
Threshold Analysis Tables

APPENDIX E – THRESHOLD ANALYSIS

Award Thresholds – Construction City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	96	42.29%	\$194,939.00	0.08%
5,000.01 to 10,000	33	14.54%	\$234,957.97	0.10%
10,000.01 to 50,000	33	14.54%	\$646,417.20	0.27%
50,000.01 to 100,000	7	3.08%	\$497,225.72	0.20%
100,000.01 to 250,000	11	4.85%	\$1,691,376.61	0.70%
250,000.01 to 500,000	15	6.61%	\$5,035,376.71	2.07%
500,000.01 to 750,000	8	3.52%	\$5,012,553.83	2.06%
750,000.01 to 1,000,000	2	0.88%	\$1,742,415.39	0.72%
1,000,000.01 to 1,500,000	4	1.76%	\$4,470,619.42	1.84%
1,500,000.01 to 2,000,000	2	0.88%	\$3,571,082.17	1.47%
2,000,000.01 to 2,500,000	1	0.44%	\$2,384,000.45	0.98%
2,500,000.01 to 5,000,000	6	2.64%	\$21,671,664.50	8.92%
Over 5,000,000	9	3.96%	\$195,748,472.55	80.59%
Total	227	100.00%	\$242,901,101.51	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$1,070,048.91	\$6,700.00

Award Thresholds – Professional Services City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	491	48.71%	\$1,133,818.12	0.31%
5,000.01 to 10,000	166	16.47%	\$1,180,867.54	0.32%
10,000.01 to 50,000	210	20.83%	\$5,150,904.11	1.41%
50,000.01 to 100,000	42	4.17%	\$3,042,754.70	0.83%
100,000.01 to 250,000	37	3.67%	\$5,938,232.17	1.63%
250,000.01 to 500,000	17	1.69%	\$6,049,856.00	1.66%
500,000.01 to 750,000	12	1.19%	\$7,433,781.10	2.04%
750,000.01 to 1,000,000	5	0.50%	\$4,247,868.66	1.16%
1,000,000.01 to 1,500,000	7	0.69%	\$8,511,454.26	2.33%
1,500,000.01 to 2,000,000	3	0.30%	\$4,848,460.98	1.33%
2,000,000.01 to 2,500,000	3	0.30%	\$6,440,071.37	1.76%
2,500,000.01 to 5,000,000	8	0.79%	\$24,921,219.93	6.82%
Over 5,000,000	7	0.69%	\$286,300,113.39	78.40%
Total	1008	100.00%	\$365,199,402.33	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$362,300.99	\$5,326.68

Award Thresholds – Other Services
 City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	2106	61.33%	\$4,764,416.90	1.87%
5,000.01 to 10,000	500	14.56%	\$3,633,793.69	1.43%
10,000.01 to 50,000	523	15.23%	\$10,803,643.26	4.24%
50,000.01 to 100,000	88	2.56%	\$6,299,582.82	2.47%
100,000.01 to 250,000	91	2.65%	\$14,815,626.55	5.81%
250,000.01 to 500,000	48	1.40%	\$16,326,735.12	6.41%
500,000.01 to 750,000	18	0.52%	\$11,178,566.21	4.39%
750,000.01 to 1,000,000	10	0.29%	\$8,850,869.26	3.47%
1,000,000.01 to 1,500,000	13	0.38%	\$15,343,351.61	6.02%
1,500,000.01 to 2,000,000	11	0.32%	\$19,398,600.34	7.61%
2,000,000.01 to 2,500,000	3	0.09%	\$7,059,441.06	2.77%
2,500,000.01 to 5,000,000	13	0.38%	\$47,470,358.80	18.63%
Over 5,000,000	10	0.29%	\$88,878,276.28	34.88%
Total	3434	100.00%	\$254,823,261.90	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$74,205.96	\$3,318.07

Award Thresholds – Architecture & Engineering City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	64	42.38%	\$161,601.63	0.63%
5,000.01 to 10,000	23	15.23%	\$192,470.48	0.76%
10,000.01 to 50,000	29	19.21%	\$628,725.06	2.47%
50,000.01 to 100,000	7	4.64%	\$514,717.32	2.02%
100,000.01 to 250,000	8	5.30%	\$1,390,979.83	5.47%
250,000.01 to 500,000	7	4.64%	\$2,582,931.76	10.15%
500,000.01 to 750,000	3	1.99%	\$1,991,882.86	7.83%
750,000.01 to 1,000,000	2	1.32%	\$1,781,990.32	7.00%
1,000,000.01 to 1,500,000	5	3.31%	\$6,194,888.96	24.34%
1,500,000.01 to 2,000,000	0	0.00%	\$0.00	0.00%
2,000,000.01 to 2,500,000	1	0.66%	\$2,294,160.55	9.01%
2,500,000.01 to 5,000,000	1	0.66%	\$2,580,884.08	10.14%
Over 5,000,000	1	0.66%	\$5,135,536.74	20.18%
Total	151	100.00%	\$25,450,769.59	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$168,548.14	\$9,158.94

Award Thresholds – Goods City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	3256	59.28%	\$7,344,994.68	3.09%
5,000.01 to 10,000	719	13.09%	\$5,185,190.90	2.18%
10,000.01 to 50,000	1134	20.64%	\$21,942,042.91	9.23%
50,000.01 to 100,000	131	2.38%	\$9,604,781.71	4.04%
100,000.01 to 250,000	132	2.40%	\$20,604,743.43	8.66%
250,000.01 to 500,000	50	0.91%	\$17,194,928.29	7.23%
500,000.01 to 750,000	21	0.38%	\$12,513,894.41	5.26%
750,000.01 to 1,000,000	9	0.16%	\$7,736,673.99	3.25%
1,000,000.01 to 1,500,000	19	0.35%	\$22,364,254.64	9.40%
1,500,000.01 to 2,000,000	4	0.07%	\$6,888,250.59	2.90%
2,000,000.01 to 2,500,000	4	0.07%	\$9,618,444.26	4.04%
2,500,000.01 to 5,000,000	8	0.15%	\$28,873,184.05	12.14%
Over 5,000,000	6	0.11%	\$67,934,973.19	28.57%
Total	5493	100.00%	\$237,806,357.08	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$43,292.62	\$3,450.00

Award Thresholds – All Work Categories
 City of Chattanooga, TN Disparity Study

Award Threshold	Number of Awards	Percent of Awards	Dollars	Percent of Dollars
1,000 to 5,000	6013	58.31%	\$13,599,770.33	1.21%
5,000.01 to 10,000	1441	13.97%	\$10,427,280.58	0.93%
10,000.01 to 50,000	1929	18.70%	\$39,171,732.53	3.48%
50,000.01 to 100,000	275	2.67%	\$19,959,062.27	1.77%
100,000.01 to 250,000	279	2.71%	\$44,440,958.60	3.95%
250,000.01 to 500,000	137	1.33%	\$47,189,827.88	4.19%
500,000.01 to 750,000	62	0.60%	\$38,130,678.42	3.39%
750,000.01 to 1,000,000	28	0.27%	\$24,359,817.62	2.16%
1,000,000.01 to 1,500,000	48	0.47%	\$56,884,568.89	5.05%
1,500,000.01 to 2,000,000	20	0.19%	\$34,706,394.08	3.08%
2,000,000.01 to 2,500,000	12	0.12%	\$27,796,117.70	2.47%
2,500,000.01 to 5,000,000	36	0.35%	\$125,517,311.36	11.15%
Over 5,000,000	33	0.32%	\$643,997,372.15	57.18%
Total	10313	100.00%	\$1,126,180,892.41	100.00%

Griffin & Strong P.C. 2019

Average	Median
\$109,200.13	\$3,600.00

Appendix F
Utilization and Disparity Analysis
Tables

APPENDIX F – UTILIZATION AND DISPARITY ANALYSIS

Prime Utilization – Construction In the Relevant Market – State of TN and State of KY City of Chattanooga, TN Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$8,000.00	0.07%	1	2.63%
	FY15	\$27,550.61	0.01%	3	5.66%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$59,350.61	0.03%	7	3.43%
Asian American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MBE	FY14	\$8,000.00	0.07%	1	2.63%
	FY15	\$27,550.61	0.01%	3	5.66%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$59,350.61	0.03%	7	3.43%
Caucasian Women	FY14	\$39,163.14	0.32%	5	13.16%
	FY15	\$332,312.61	0.18%	5	9.43%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$14,172.92	0.27%	3	8.11%
	FY18	\$77,902.00	0.67%	2	5.00%
	Study Period	\$463,550.67	0.20%	15	7.35%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MWBE/DBE	FY14	\$47,163.14	0.38%	6	15.79%
	FY15	\$359,863.22	0.19%	8	15.09%
	FY16	\$23,800.00	0.15%	3	8.33%
	FY17	\$14,172.92	0.27%	3	8.11%
	FY18	\$77,902.00	0.67%	2	5.00%
	Study Period	\$522,901.28	0.23%	22	10.78%
Non-MWBE	FY14	\$12,234,249.21	99.62%	32	84.21%
	FY15	\$184,397,998.57	99.81%	45	84.91%
	FY16	\$16,283,562.61	99.85%	33	91.67%
	FY17	\$5,291,883.17	99.73%	34	91.89%
	FY18	\$11,508,125.70	99.33%	38	95.00%
	Study Period	\$229,715,819.25	99.77%	182	89.22%
Total	FY14	\$12,281,412.35	100.00%	38	100.00%
	FY15	\$184,757,861.79	100.00%	53	100.00%
	FY16	\$16,307,362.61	100.00%	36	100.00%
	FY17	\$5,306,056.08	100.00%	37	100.00%
	FY18	\$11,586,027.70	100.00%	40	100.00%
	Study Period	\$230,238,720.53	100.00%	204	100.00%

Prime Utilization – Professional Services
 In the Relevant Market – Hamilton County, TN
 City of Chattanooga, TN Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$54,000.00	0.03%	1	0.98%
	FY15	\$64,075.00	1.52%	3	2.86%
	FY16	\$61,950.00	0.38%	2	1.94%
	FY17	\$221,616.39	1.24%	5	4.63%
	FY18	\$163,795.68	0.19%	5	5.75%
	Study Period	\$565,437.07	0.18%	16	3.17%
Asian American	FY14	\$1,275.00	0.00%	1	0.98%
	FY15	\$3,000.00	0.07%	2	1.90%
	FY16	\$3,975.00	0.02%	2	1.94%
	FY17	\$7,575.00	0.04%	1	0.93%
	FY18	\$6,000.00	0.01%	1	1.15%
	Study Period	\$21,825.00	0.01%	7	1.39%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$82,314.00	0.10%	1	1.15%
	Study Period	\$82,314.00	0.03%	1	0.20%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$3,800.00	0.02%	1	0.97%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$3,800.00	0.00%	1	0.20%
Total MBE	FY14	\$55,275.00	0.03%	2	1.96%
	FY15	\$67,075.00	1.59%	5	4.76%
	FY16	\$69,725.00	0.43%	5	4.85%
	FY17	\$229,191.39	1.29%	6	5.56%
	FY18	\$252,109.68	0.30%	7	8.05%
	Study Period	\$673,376.07	0.22%	25	4.95%
Caucasian Women	FY14	\$48,903.06	0.03%	8	7.84%
	FY15	\$1,253,633.51	29.79%	8	7.62%
	FY16	\$105,647.38	0.64%	8	7.77%
	FY17	\$153,800.00	0.86%	15	13.89%
	FY18	\$158,027.10	0.19%	13	14.94%
	Study Period	\$1,720,011.05	0.56%	52	10.30%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$2,975.00	0.07%	1	0.95%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$2,975.00	0.00%	1	0.20%
Total MWBE/DBE	FY14	\$104,178.06	0.06%	10	9.80%
	FY15	\$1,323,683.51	31.46%	14	13.33%
	FY16	\$175,372.38	1.07%	13	12.62%
	FY17	\$382,991.39	2.15%	21	19.44%
	FY18	\$410,136.78	0.49%	20	22.99%
	Study Period	\$2,396,362.12	0.78%	78	15.45%
Non-MWBE	FY14	\$184,829,550.78	99.94%	92	90.20%
	FY15	\$2,884,326.38	68.54%	91	86.67%
	FY16	\$16,210,343.61	98.93%	90	87.38%
	FY17	\$17,438,872.59	97.85%	87	80.56%
	FY18	\$83,757,287.06	99.51%	67	77.01%
	Study Period	\$305,120,380.43	99.22%	427	84.55%
Total	FY14	\$184,933,728.84	100.00%	102	100.00%
	FY15	\$4,208,009.88	100.00%	105	100.00%
	FY16	\$16,385,715.99	100.00%	103	100.00%
	FY17	\$17,821,863.98	100.00%	108	100.00%
	FY18	\$84,167,423.84	100.00%	87	100.00%
	Study Period	\$307,516,742.54	100.00%	505	100.00%

Prime Utilization - Other Services
 In the Relevant Market – State of TN and State of GA
 City of Chattanooga, TN Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$1,577,730.03	5.48%	71	14.29%
	FY15	\$945,976.28	3.62%	85	17.14%
	FY16	\$2,065,467.13	5.43%	53	8.72%
	FY17	\$1,137,754.05	1.79%	47	9.98%
	FY18	\$989,363.10	2.50%	42	7.69%
	Study Period	\$6,716,290.59	3.43%	298	11.38%
Asian American	FY14	\$238,731.19	0.83%	3	0.60%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$30,754.20	0.05%	9	1.91%
	FY18	\$194,135.00	0.49%	19	3.48%
	Study Period	\$463,620.39	0.24%	31	1.18%
Hispanic American	FY14	\$2,625.16	0.01%	2	0.40%
	FY15	\$96,842.90	0.37%	1	0.20%
	FY16	\$111,377.22	0.29%	6	0.99%
	FY17	\$227,679.13	0.36%	3	0.64%
	FY18	\$58,221.32	0.15%	7	1.28%
	Study Period	\$496,745.73	0.25%	19	0.73%
Native American	FY14	\$1,554.50	0.01%	1	0.20%
	FY15	\$21,873.00	0.08%	1	0.20%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$932,277.62	1.47%	1	0.21%
	FY18	\$598,174.98	1.51%	2	0.37%
	Study Period	\$1,553,880.10	0.79%	5	0.19%
Total MBE	FY14	\$1,820,640.88	6.33%	77	15.49%
	FY15	\$1,064,692.18	4.08%	87	17.54%
	FY16	\$2,176,844.35	5.72%	59	9.70%
	FY17	\$2,328,465.00	3.67%	60	12.74%
	FY18	\$1,839,894.40	4.66%	70	12.82%
	Study Period	\$9,230,536.81	4.71%	353	13.48%
Caucasian Women	FY14	\$1,622,223.19	5.64%	37	7.44%
	FY15	\$276,951.11	1.06%	45	9.07%
	FY16	\$352,799.76	0.93%	47	7.73%
	FY17	\$3,612,142.96	5.70%	37	7.86%
	FY18	\$848,325.46	2.15%	29	5.31%
	Study Period	\$6,712,442.48	3.43%	195	7.45%
Unidentified MWBE/DBE	FY14	\$339,198.30	1.18%	8	1.61%
	FY15	\$82,436.10	0.32%	10	2.02%
	FY16	\$266,489.75	0.70%	12	1.97%
	FY17	\$163,563.50	0.26%	22	4.67%
	FY18	\$19,718.00	0.05%	5	0.92%
	Study Period	\$871,405.65	0.44%	57	2.18%
Total MWBE/DBE	FY14	\$3,782,062.37	13.14%	122	24.55%
	FY15	\$1,424,079.39	5.45%	142	28.63%
	FY16	\$2,796,133.86	7.35%	118	19.41%
	FY17	\$6,104,171.46	9.63%	119	25.27%
	FY18	\$2,707,937.86	6.85%	104	19.05%
	Study Period	\$16,814,384.94	8.59%	605	23.11%
Non-MWBE	FY14	\$24,991,657.29	86.86%	375	75.45%
	FY15	\$24,692,052.80	94.55%	354	71.37%
	FY16	\$35,229,440.43	92.65%	490	80.59%
	FY17	\$57,289,922.35	90.37%	352	74.73%
	FY18	\$36,812,717.12	93.15%	442	80.95%
	Study Period	\$179,015,789.99	91.41%	2013	76.89%
Total	FY14	\$28,773,719.67	100.00%	497	100.00%
	FY15	\$26,116,132.18	100.00%	496	100.00%
	FY16	\$38,025,574.30	100.00%	608	100.00%
	FY17	\$63,394,093.81	100.00%	471	100.00%
	FY18	\$39,520,654.97	100.00%	546	100.00%
	Study Period	\$195,830,174.93	100.00%	2618	100.00%

Prime Utilization – Architecture & Engineering
 In the Relevant Market – Hamilton County, TN
 City of Chattanooga Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Asian American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Hispanic American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Native American	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Caucasian Women	FY14	\$3,225.00	0.04%	1	6.67%
	FY15	\$21,198.03	0.77%	5	19.23%
	FY16	\$3,350.00	0.09%	1	5.00%
	FY17	\$1,322,702.86	30.78%	5	16.13%
	FY18	\$34,550.00	1.82%	3	33.33%
	Study Period	\$1,385,025.89	6.64%	15	14.85%
Unidentified MWBE/DBE	FY14	\$0.00	0.00%	0	0.00%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$0.00	0.00%	0	0.00%
	FY17	\$0.00	0.00%	0	0.00%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$0.00	0.00%	0	0.00%
Total MWBE/DBE	FY14	\$3,225.00	0.04%	1	6.67%
	FY15	\$21,198.03	0.77%	5	19.23%
	FY16	\$3,350.00	0.09%	1	5.00%
	FY17	\$1,322,702.86	30.78%	5	16.13%
	FY18	\$34,550.00	1.82%	3	33.33%
	Study Period	\$1,385,025.89	6.64%	15	14.85%
Non-MWBE	FY14	\$8,097,472.53	99.96%	14	93.33%
	FY15	\$2,724,323.85	99.23%	21	80.77%
	FY16	\$3,830,881.50	99.91%	19	95.00%
	FY17	\$2,974,273.47	69.22%	26	83.87%
	FY18	\$1,861,409.85	98.18%	6	66.67%
	Study Period	\$19,488,361.20	93.36%	86	85.15%
Total	FY14	\$8,100,697.53	100.00%	15	100.00%
	FY15	\$2,745,521.88	100.00%	26	100.00%
	FY16	\$3,834,231.50	100.00%	20	100.00%
	FY17	\$4,296,976.33	100.00%	31	100.00%
	FY18	\$1,895,959.85	100.00%	9	100.00%
	Study Period	\$20,873,387.09	100.00%	101	100.00%

Prime Utilization – Goods by Dollars
In the Relevant Market – USA
City of Chattanooga, TN Disparity Study

Race/Ethnicity	Year	Total Dollars	Percent of Total Dollars	Total Awards	Percent of Total Awards
African American	FY14	\$21,947.05	0.06%	10	0.89%
	FY15	\$42,869.40	0.05%	10	0.86%
	FY16	\$31,800.00	0.07%	6	0.53%
	FY17	\$74,319.93	0.16%	8	0.74%
	FY18	\$155,383.34	0.61%	8	0.82%
	Study Period	\$326,319.72	0.14%	42	0.76%
Asian American	FY14	\$18,995.88	0.05%	4	0.36%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$9,981.30	0.02%	4	0.35%
	FY17	\$81,118.46	0.17%	3	0.28%
	FY18	\$72,679.53	0.28%	4	0.41%
	Study Period	\$182,775.17	0.08%	15	0.27%
Hispanic American	FY14	\$4,068.95	0.01%	2	0.18%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$28,787.79	0.06%	4	0.35%
	FY17	\$1,132,455.00	2.42%	1	0.09%
	FY18	\$18,584.00	0.07%	3	0.31%
	Study Period	\$1,183,895.74	0.50%	10	0.18%
Native American	FY14	\$5,743.00	0.02%	3	0.27%
	FY15	\$0.00	0.00%	0	0.00%
	FY16	\$2,302.11	0.00%	1	0.09%
	FY17	\$3,375.00	0.01%	1	0.09%
	FY18	\$0.00	0.00%	0	0.00%
	Study Period	\$11,420.11	0.00%	5	0.09%
Total MBE	FY14	\$50,754.88	0.14%	19	1.69%
	FY15	\$42,869.40	0.05%	10	0.86%
	FY16	\$72,871.20	0.15%	15	1.32%
	FY17	\$1,291,268.39	2.76%	13	1.20%
	FY18	\$246,646.87	0.97%	15	1.53%
	Study Period	\$1,704,410.74	0.72%	72	1.31%
Caucasian Women	FY14	\$655,954.28	1.79%	43	3.82%
	FY15	\$1,828,938.76	2.29%	43	3.68%
	FY16	\$858,294.74	1.76%	46	4.06%
	FY17	\$1,045,229.15	2.23%	56	5.16%
	FY18	\$1,012,649.26	3.97%	44	4.49%
	Study Period	\$5,401,066.19	2.27%	232	4.22%
Unidentified MWBE/DBE	FY14	\$9,606.79	0.03%	5	0.44%
	FY15	\$8,789.40	0.01%	4	0.34%
	FY16	\$69,027.50	0.14%	7	0.62%
	FY17	\$20,228.93	0.04%	4	0.37%
	FY18	\$11,100.00	0.04%	3	0.31%
	Study Period	\$118,752.62	0.05%	23	0.42%
Total MWBE/DBE	FY14	\$716,315.95	1.95%	67	5.96%
	FY15	\$1,880,597.56	2.35%	57	4.88%
	FY16	\$1,000,193.44	2.05%	68	6.00%
	FY17	\$2,356,726.47	5.04%	73	6.73%
	FY18	\$1,270,396.13	4.98%	62	6.33%
	Study Period	\$7,224,229.55	3.04%	327	5.95%
Non-MWBE	FY14	\$35,978,080.91	98.05%	1058	94.04%
	FY15	\$78,119,268.61	97.65%	1112	95.12%
	FY16	\$47,819,563.00	97.95%	1066	94.00%
	FY17	\$44,421,532.70	94.96%	1012	93.27%
	FY18	\$24,243,682.30	95.02%	918	93.67%
	Study Period	\$230,582,127.53	96.96%	5166	94.05%
Total	FY14	\$36,694,396.86	100.00%	1125	100.00%
	FY15	\$79,999,866.17	100.00%	1169	100.00%
	FY16	\$48,819,756.44	100.00%	1134	100.00%
	FY17	\$46,778,259.17	100.00%	1085	100.00%
	FY18	\$25,514,078.43	100.00%	980	100.00%
	Study Period	\$237,806,357.08	100.00%	5493	100.00%

Disparity Indices– Construction (Prime)
 In the Relevant Market
 Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization	
African American	FY14	0.07%		9.80%	0.01	SS Underutilization
	FY15	0.01%		9.80%	0.00	SS Underutilization
	FY16	0.15%		9.80%	0.01	SS Underutilization
	FY17	0.00%		9.80%	0.00	SS Underutilization
	FY18	0.00%		9.80%	0.00	SS Underutilization
	Study Period	0.03%		9.80%	0.00	SS Underutilization
Asian American	FY14	0.00%		1.06%	0.00	SS Underutilization
	FY15	0.00%		1.06%	0.00	SS Underutilization
	FY16	0.00%		1.06%	0.00	SS Underutilization
	FY17	0.00%		1.06%	0.00	SS Underutilization
	FY18	0.00%		1.06%	0.00	SS Underutilization
	Study Period	0.00%		1.06%	0.00	SS Underutilization
Hispanic American	FY14	0.00%		1.65%	0.00	SS Underutilization
	FY15	0.00%		1.65%	0.00	SS Underutilization
	FY16	0.00%		1.65%	0.00	SS Underutilization
	FY17	0.00%		1.65%	0.00	SS Underutilization
	FY18	0.00%		1.65%	0.00	SS Underutilization
	Study Period	0.00%		1.65%	0.00	SS Underutilization
Native American	FY14	0.00%		0.59%	0.00	SS Underutilization
	FY15	0.00%		0.59%	0.00	SS Underutilization
	FY16	0.00%		0.59%	0.00	SS Underutilization
	FY17	0.00%		0.59%	0.00	SS Underutilization
	FY18	0.00%		0.59%	0.00	SS Underutilization
	Study Period	0.00%		0.59%	0.00	SS Underutilization
Total MBE	FY14	0.07%		13.11%	0.00	SS Underutilization
	FY15	0.01%		13.11%	0.00	SS Underutilization
	FY16	0.15%		13.11%	0.01	SS Underutilization
	FY17	0.00%		13.11%	0.00	SS Underutilization
	FY18	0.00%		13.11%	0.00	SS Underutilization
	Study Period	0.03%		13.11%	0.00	SS Underutilization
Caucasian Women	FY14	0.32%		19.13%	0.02	SS Underutilization
	FY15	0.18%		19.13%	0.01	SS Underutilization
	FY16	0.00%		19.13%	0.00	SS Underutilization
	FY17	0.27%		19.13%	0.01	SS Underutilization
	FY18	0.67%		19.13%	0.04	SS Underutilization
	Study Period	0.20%		19.13%	0.01	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%		0.35%	0.00	SS Underutilization
	FY15	0.00%		0.35%	0.00	SS Underutilization
	FY16	0.00%		0.35%	0.00	SS Underutilization
	FY17	0.00%		0.35%	0.00	SS Underutilization
	FY18	0.00%		0.35%	0.00	SS Underutilization
	Study Period	0.00%		0.35%	0.00	SS Underutilization
Total MWBE/DBE	FY14	0.38%		32.59%	0.01	SS Underutilization
	FY15	0.19%		32.59%	0.01	SS Underutilization
	FY16	0.15%		32.59%	0.00	SS Underutilization
	FY17	0.27%		32.59%	0.01	SS Underutilization
	FY18	0.67%		32.59%	0.02	SS Underutilization
	Study Period	0.23%		32.59%	0.01	SS Underutilization
Non-MWBE	FY14	99.62%		67.41%	1.48	SS Overutilization
	FY15	99.81%		67.41%	1.48	SS Overutilization
	FY16	99.85%		67.41%	1.48	SS Overutilization
	FY17	99.73%		67.41%	1.48	SS Overutilization
	FY18	99.33%		67.41%	1.47	SS Overutilization
	Study Period	99.77%		67.41%	1.48	SS Overutilization



























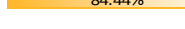



Disparity Indices– Professional Services (Prime)
In the Relevant Market
Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.03%	3.41%	0.01	SS Underutilization
	FY15	1.52%	3.41%	0.45	SS Underutilization
	FY16	0.38%	3.41%	0.11	SS Underutilization
	FY17	1.24%	3.41%	0.37	SS Underutilization
	FY18	0.19%	3.41%	0.06	SS Underutilization
	Study Period	0.18%	3.41%	0.05	SS Underutilization
Asian American	FY14	0.00%	0.20%	0.00	SS Underutilization
	FY15	0.07%	0.20%	0.36	SS Underutilization
	FY16	0.02%	0.20%	0.12	SS Underutilization
	FY17	0.04%	0.20%	0.21	SS Underutilization
	FY18	0.01%	0.20%	0.04	SS Underutilization
	Study Period	0.01%	0.20%	0.04	SS Underutilization
Hispanic American	FY14	0.00%	0.50%	0.00	SS Underutilization
	FY15	0.00%	0.50%	0.00	SS Underutilization
	FY16	0.00%	0.50%	0.00	SS Underutilization
	FY17	0.00%	0.50%	0.00	SS Underutilization
	FY18	0.10%	0.50%	0.20	SS Underutilization
	Study Period	0.03%	0.50%	0.05	SS Underutilization
Native American	FY14	0.00%	0.10%	0.00	SS Underutilization
	FY15	0.00%	0.10%	0.00	SS Underutilization
	FY16	0.02%	0.10%	0.23	SS Underutilization
	FY17	0.00%	0.10%	0.00	SS Underutilization
	FY18	0.00%	0.10%	0.00	SS Underutilization
	Study Period	0.00%	0.10%	0.01	SS Underutilization
Total MBE	FY14	0.03%	4.21%	0.01	SS Underutilization
	FY15	1.59%	4.21%	0.38	SS Underutilization
	FY16	0.43%	4.21%	0.10	SS Underutilization
	FY17	1.29%	4.21%	0.31	SS Underutilization
	FY18	0.30%	4.21%	0.07	SS Underutilization
	Study Period	0.22%	4.21%	0.05	SS Underutilization
Caucasian Women	FY14	0.03%	5.21%	0.01	SS Underutilization
	FY15	29.79%	5.21%	5.72	SS Overutilization
	FY16	0.64%	5.21%	0.12	SS Underutilization
	FY17	0.86%	5.21%	0.17	SS Underutilization
	FY18	0.19%	5.21%	0.04	SS Underutilization
	Study Period	0.56%	5.21%	0.11	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%	0.70%	0.00	SS Underutilization
	FY15	0.07%	0.70%	0.10	SS Underutilization
	FY16	0.00%	0.70%	0.00	SS Underutilization
	FY17	0.00%	0.70%	0.00	SS Underutilization
	FY18	0.00%	0.70%	0.00	SS Underutilization
	Study Period	0.00%	0.70%	0.00	SS Underutilization
Total MWBE/DBE	FY14	0.06%	10.12%	0.01	SS Underutilization
	FY15	31.46%	10.12%	3.11	SS Overutilization
	FY16	1.07%	10.12%	0.11	SS Underutilization
	FY17	2.15%	10.12%	0.21	SS Underutilization
	FY18	0.49%	10.12%	0.05	SS Underutilization
	Study Period	0.78%	10.12%	0.08	SS Underutilization
Non-MWBE	FY14	99.94%	89.88%	1.11	SS Overutilization
	FY15	68.54%	89.88%	0.76	SS Underutilization
	FY16	98.93%	89.88%	1.10	SS Overutilization
	FY17	97.85%	89.88%	1.09	Overutilization
	FY18	99.51%	89.88%	1.11	SS Overutilization
	Study Period	99.22%	89.88%	1.10	SS Overutilization

Disparity Indices– Other Services (Prime)
In the Relevant Market
Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	5.48%	7.88%	0.70	SS Underutilization
	FY15	3.62%	7.88%	0.46	SS Underutilization
	FY16	5.43%	7.88%	0.69	SS Underutilization
	FY17	1.79%	7.88%	0.23	SS Underutilization
	FY18	2.50%	7.88%	0.32	SS Underutilization
	Study Period	3.43%	7.88%	0.43	SS Underutilization
Asian American	FY14	0.83%	0.98%	0.85	Underutilization
	FY15	0.00%	0.98%	0.00	SS Underutilization
	FY16	0.00%	0.98%	0.00	SS Underutilization
	FY17	0.05%	0.98%	0.05	SS Underutilization
	FY18	0.49%	0.98%	0.50	SS Underutilization
	Study Period	0.24%	0.98%	0.24	SS Underutilization
Hispanic American	FY14	0.01%	1.12%	0.01	SS Underutilization
	FY15	0.37%	1.12%	0.33	SS Underutilization
	FY16	0.29%	1.12%	0.26	SS Underutilization
	FY17	0.36%	1.12%	0.32	SS Underutilization
	FY18	0.15%	1.12%	0.13	SS Underutilization
	Study Period	0.25%	1.12%	0.23	SS Underutilization
Native American	FY14	0.01%	0.29%	0.02	SS Underutilization
	FY15	0.08%	0.29%	0.29	SS Underutilization
	FY16	0.00%	0.29%	0.00	SS Underutilization
	FY17	1.47%	0.29%	5.11	SS Overutilization
	FY18	1.51%	0.29%	5.26	SS Overutilization
	Study Period	0.79%	0.29%	2.76	SS Overutilization
Total MBE	FY14	6.33%	10.27%	0.62	SS Underutilization
	FY15	4.08%	10.27%	0.40	SS Underutilization
	FY16	5.72%	10.27%	0.56	SS Underutilization
	FY17	3.67%	10.27%	0.36	SS Underutilization
	FY18	4.66%	10.27%	0.45	SS Underutilization
	Study Period	4.71%	10.27%	0.46	SS Underutilization
Caucasian Women	FY14	5.64%	9.27%	0.61	SS Underutilization
	FY15	1.06%	9.27%	0.11	SS Underutilization
	FY16	0.93%	9.27%	0.10	SS Underutilization
	FY17	5.70%	9.27%	0.61	SS Underutilization
	FY18	2.15%	9.27%	0.23	SS Underutilization
	Study Period	3.43%	9.27%	0.37	SS Underutilization
Unidentified MWBE/DBE	FY14	1.18%	0.81%	1.46	SS Overutilization
	FY15	0.32%	0.81%	0.39	SS Underutilization
	FY16	0.70%	0.81%	0.87	Underutilization
	FY17	0.26%	0.81%	0.32	SS Underutilization
	FY18	0.05%	0.81%	0.06	SS Underutilization
	Study Period	0.44%	0.81%	0.55	SS Underutilization
Total MWBE/DBE	FY14	13.14%	20.35%	0.65	SS Underutilization
	FY15	5.45%	20.35%	0.27	SS Underutilization
	FY16	7.35%	20.35%	0.36	SS Underutilization
	FY17	9.63%	20.35%	0.47	SS Underutilization
	FY18	6.85%	20.35%	0.34	SS Underutilization
	Study Period	8.59%	20.35%	0.42	SS Underutilization
Non-MWBE	FY14	86.86%	79.65%	1.09	Overutilization
	FY15	94.55%	79.65%	1.19	SS Overutilization
	FY16	92.65%	79.65%	1.16	SS Overutilization
	FY17	90.37%	79.65%	1.13	SS Overutilization
	FY18	93.15%	79.65%	1.17	SS Overutilization
	Study Period	91.41%	79.65%	1.15	SS Overutilization

Disparity Indices– Architecture & Engineering (Prime)
In the Relevant Market
Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.00%	 3.33%	0.00	SS Underutilization
	FY15	0.00%	 3.33%	0.00	SS Underutilization
	FY16	0.00%	 3.33%	0.00	SS Underutilization
	FY17	0.00%	 3.33%	0.00	SS Underutilization
	FY18	0.00%	 3.33%	0.00	SS Underutilization
	Study Period	0.00%	 3.33%	0.00	SS Underutilization
Asian American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Hispanic American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Native American	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Total MBE	FY14	0.00%	 3.33%	0.00	SS Underutilization
	FY15	0.00%	 3.33%	0.00	SS Underutilization
	FY16	0.00%	 3.33%	0.00	SS Underutilization
	FY17	0.00%	 3.33%	0.00	SS Underutilization
	FY18	0.00%	 3.33%	0.00	SS Underutilization
	Study Period	0.00%	 3.33%	0.00	SS Underutilization
Caucasian Women	FY14	0.04%	 12.22%	0.00	SS Underutilization
	FY15	0.77%	 12.22%	0.06	SS Underutilization
	FY16	0.09%	 12.22%	0.01	SS Underutilization
	FY17	30.78%	 12.22%	2.52	SS Overutilization
	FY18	1.82%	 12.22%	0.15	SS Underutilization
	Study Period	6.64%	 12.22%	0.54	SS Underutilization
Unidentified MWBE/DBE	FY14	0.00%	0.00%	0.00	Parity
	FY15	0.00%	0.00%	0.00	Parity
	FY16	0.00%	0.00%	0.00	Parity
	FY17	0.00%	0.00%	0.00	Parity
	FY18	0.00%	0.00%	0.00	Parity
	Study Period	0.00%	0.00%	0.00	Parity
Total MWBE/DBE	FY14	0.04%	 15.56%	0.00	SS Underutilization
	FY15	0.77%	 15.56%	0.05	SS Underutilization
	FY16	0.09%	 15.56%	0.01	SS Underutilization
	FY17	30.78%	 15.56%	1.98	SS Overutilization
	FY18	1.82%	 15.56%	0.12	SS Underutilization
	Study Period	6.64%	 15.56%	0.43	SS Underutilization
Non-MWBE	FY14	99.96%	 84.44%	1.18	SS Overutilization
	FY15	99.23%	 84.44%	1.18	SS Overutilization
	FY16	99.91%	 84.44%	1.18	SS Overutilization
	FY17	69.22%	 84.44%	0.82	Underutilization
	FY18	98.18%	 84.44%	1.16	SS Overutilization
	Study Period	93.36%	 84.44%	1.11	SS Overutilization

Disparity Indices– Goods (Prime)
In the Relevant Market
Chattanooga Disparity Study

Business Ownership	Year	Percent of Dollars	Percent of Available Firms	Disparity Index	Disparate Impact of Utilization
African American	FY14	0.06%	2.50%	0.02	SS Underutilization
	FY15	0.05%	2.50%	0.02	SS Underutilization
	FY16	0.07%	2.50%	0.03	SS Underutilization
	FY17	0.16%	2.50%	0.06	SS Underutilization
	FY18	0.61%	2.50%	0.24	SS Underutilization
	Study Period	0.14%	2.50%	0.05	SS Underutilization
Asian American	FY14	0.05%	0.93%	0.06	SS Underutilization
	FY15	0.00%	0.93%	0.00	SS Underutilization
	FY16	0.02%	0.93%	0.02	SS Underutilization
	FY17	0.17%	0.93%	0.19	SS Underutilization
	FY18	0.28%	0.93%	0.31	SS Underutilization
	Study Period	0.08%	0.93%	0.08	SS Underutilization
Hispanic American	FY14	0.01%	0.65%	0.02	SS Underutilization
	FY15	0.00%	0.65%	0.00	SS Underutilization
	FY16	0.06%	0.65%	0.09	SS Underutilization
	FY17	2.42%	0.65%	3.74	SS Overutilization
	FY18	0.07%	0.65%	0.11	SS Underutilization
	Study Period	0.50%	0.65%	0.77	SS Underutilization
Native American	FY14	0.02%	0.34%	0.05	SS Underutilization
	FY15	0.00%	0.34%	0.00	SS Underutilization
	FY16	0.00%	0.34%	0.01	SS Underutilization
	FY17	0.01%	0.34%	0.02	SS Underutilization
	FY18	0.00%	0.34%	0.00	SS Underutilization
	Study Period	0.00%	0.34%	0.01	SS Underutilization
Total MBE	FY14	0.14%	4.41%	0.03	SS Underutilization
	FY15	0.05%	4.41%	0.01	SS Underutilization
	FY16	0.15%	4.41%	0.03	SS Underutilization
	FY17	2.76%	4.41%	0.63	SS Underutilization
	FY18	0.97%	4.41%	0.22	SS Underutilization
	Study Period	0.72%	4.41%	0.16	SS Underutilization
Caucasian Women	FY14	1.79%	7.62%	0.23	SS Underutilization
	FY15	2.29%	7.62%	0.30	SS Underutilization
	FY16	1.76%	7.62%	0.23	SS Underutilization
	FY17	2.23%	7.62%	0.29	SS Underutilization
	FY18	3.97%	7.62%	0.52	SS Underutilization
	Study Period	2.27%	7.62%	0.30	SS Underutilization
Unidentified MWBE/DBE	FY14	0.03%	0.25%	0.10	SS Underutilization
	FY15	0.01%	0.25%	0.04	SS Underutilization
	FY16	0.14%	0.25%	0.56	SS Underutilization
	FY17	0.04%	0.25%	0.17	SS Underutilization
	FY18	0.04%	0.25%	0.17	SS Underutilization
	Study Period	0.05%	0.25%	0.20	SS Underutilization
Total MWBE/DBE	FY14	1.95%	12.29%	0.16	SS Underutilization
	FY15	2.35%	12.29%	0.19	SS Underutilization
	FY16	2.05%	12.29%	0.17	SS Underutilization
	FY17	5.04%	12.29%	0.41	SS Underutilization
	FY18	4.98%	12.29%	0.41	SS Underutilization
	Study Period	3.04%	12.29%	0.25	SS Underutilization
Non-MWBE	FY14	98.05%	87.71%	1.12	SS Overutilization
	FY15	97.65%	87.71%	1.11	SS Overutilization
	FY16	97.95%	87.71%	1.12	SS Overutilization
	FY17	94.96%	87.71%	1.08	Overutilization
	FY18	95.02%	87.71%	1.08	Overutilization
	Study Period	96.96%	87.71%	1.11	SS Overutilization

Appendix G
Subcontractor Utilization Tables

APPENDIX G – SUBCONTRACTOR UTILIZATION

Subcontractor Utilization – Construction by Dollars
 In the Relevant Market – State of TN and State of KY
 Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$11,010.00	2.89%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$11,010.00	2.89%
Caucasian Women	\$0.00	0.00%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$11,010.00	2.89%
Non-MWBE	\$370,494.00	97.11%
Total	\$381,504.00	100.00%

Griffin & Strong P.C. 2019

Subcontractor Utilization – Professional Services by Dollars
 In the Relevant Market – Hamilton County, TN
 Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$0.00	0.00%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$0.00	0.00%
Caucasian Women	\$64,100.00	72.12%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$64,100.00	72.12%
Non-MWBE	\$24,780.00	27.88%
Total	\$88,880.00	100.00%

Griffin & Strong P.C. 2019

Subcontractor Utilization – Architecture & Engineering by Dollars
 In the Relevant Market – Hamilton County, TN
 Chattanooga Disparity Study

Race/Ethnicity	Total Dollars	Total Percent
African American	\$12,650.00	16.79%
Asian American	\$0.00	0.00%
Hispanic American	\$0.00	0.00%
Native American	\$0.00	0.00%
Total MBE	\$12,650.00	16.79%
Caucasian Women	\$20,372.50	27.04%
Unidentified MWBE/DBE	\$0.00	0.00%
Total MWBE/DBE	\$33,022.50	43.83%
Non-MWBE	\$42,317.50	56.17%
Total	\$75,340.00	100.00%

Griffin & Strong P.C. 2019

Appendix H
Availability By Work Category

APPENDIX H – AVAILABILITY ESTIMATES BY WORK CATEGORY

Availability Estimates by Work Categories

By Relevant Market

City of Chattanooga Disparity Study

Ethnicity	Construction	A&E	Professional Services	Other Services	Goods
African American	9.80%	3.33%	3.41%	7.88%	2.50%
Asian American	1.06%	0.00%	0.20%	0.98%	0.93%
Hispanic American	1.65%	0.00%	0.50%	1.12%	0.65%
Native American	0.59%	0.00%	0.53%	0.29%	0.34%
Unidentified MWBE/DBE	0.35%	0.00%	0.70%	0.81%	0.25%
Total Minority	13.45%	3.33%	5.34%	11.08%	4.67%
Caucasian Female	19.13%	12.22%	5.21%	9.27%	7.62%
Total MWBE	32.58%	15.55%	10.55%	20.35%	12.29%
Non-MWBE	67.41%	84.44%	89.88%	79.65%	87.71%
Total	100%	100%	100%	100%	100%

Appendix I
Survey of Business Owners Tables

APPENDIX I – SURVEY OF BUSINESS OWNERS TABLES

A brief note on how tables are calculated

Duplicate responses have been removed. Duplicate responses were removed based on businesses having either the same email address or same business name.

The total count of responses for each question includes only those participants who responded to that question. Participants who skipped or were not given a question are not included.

Table 1

<i>Is your company a not for profit organization or a government entity? If Yes, please submit now and do not complete the remainder of this survey.</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
No	52 100 %	79 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	208 100 %
Total	52 100 %	79 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	208 100 %

Table 4

<i>On average, what is the number of employees and regular independent contractors (including full-time and part-time staff) your company keeps on payroll? (Number of Employees)</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>	<i>Other</i>	
None	1 1.9 %	5 6.3 %	3 5.2 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	10 4.8 %
1-10	27 51.9 %	46 58.2 %	38 65.5 %	1 33.3 %	7 77.8 %	0 0 %	0 0 %	0 0 %	119 57.2 %
11-30	13 25 %	20 25.3 %	11 19 %	0 0 %	1 11.1 %	2 50 %	0 0 %	0 0 %	47 22.6 %
31-50	7 13.5 %	3 3.8 %	0 0 %	0 0 %	0 0 %	2 50 %	0 0 %	0 0 %	12 5.8 %
51-75	1 1.9 %	4 5.1 %	2 3.4 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	8 3.8 %
76-100	3 5.8 %	1 1.3 %	2 3.4 %	0 0 %	1 11.1 %	0 0 %	0 0 %	1 50 %	8 3.8 %
101-300	0 0 %	0 0 %	0 0 %	1 33.3 %	0 0 %	0 0 %	0 0 %	1 50 %	2 1 %
Over 300	0 0 %	0 0 %	2 3.4 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1 %
Total	52 100 %	79 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	208 100 %

Table 5

<i>Is at least 51% percent of your company owned and controlled by a Female or Females?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	79 100 %	30 51.7 %	2 66.7 %	4 44.4 %	1 25 %	0 0 %	0 0 %	116 55.8 %
No	52 100 %	0 0 %	28 48.3 %	1 33.3 %	5 55.6 %	3 75 %	1 100 %	2 100 %	92 44.2 %
Total	52 100 %	79 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	208 100 %

Table 6

<i>What is the race or ethnic identity of the person or persons that own at least 51% of the company?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Caucasian	52 100 %	78 98.7 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	130 62.5 %
African American	0 0 %	0 0 %	58 100 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	58 27.9 %
Asian American	0 0 %	0 0 %	0 0 %	3 100 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.4 %
Hispanic American	0 0 %	0 0 %	0 0 %	0 0 %	7 77.8 %	0 0 %	0 0 %	0 0 %	7 3.4 %
Native American	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 100 %	0 0 %	0 0 %	4 1.9 %
Bi-Racial or Multi-Racial	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	1 0.5 %
Publicly Traded Company	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Other	0 0 %	1 1.3 %	0 0 %	0 0 %	2 22.2 %	0 0 %	0 0 %	2 100 %	5 2.4 %
Total	52 100 %	79 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	208 100 %

Table 7

<i>What is the highest level of education completed by the owner of your company? Would you say:</i>	<i>Owners' Minority Status</i>							<i>Total</i>	
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>		<i>Other</i>
Some High School	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
High School graduate	4 7.7 %	5 6.5 %	4 6.9 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	14 6.8 %
Some College	11 21.2 %	17 22.1 %	10 17.2 %	0 0 %	3 33.3 %	3 75 %	0 0 %	0 0 %	44 21.4 %
College Graduate	29 55.8 %	39 50.6 %	18 31 %	2 66.7 %	2 22.2 %	0 0 %	0 0 %	1 50 %	91 44.2 %
Post Graduate Degree	8 15.4 %	16 20.8 %	23 39.7 %	1 33.3 %	4 44.4 %	0 0 %	0 0 %	1 50 %	53 25.7 %
Trade or Technical Certificate	0 0 %	0 0 %	3 5.2 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	4 1.9 %
Don't Know	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Total	52 100 %	77 100 %	58 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	206 100 %

Table 8

<i>How many years of experience in your company's line of business does the primary owner of your company have?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>	<i>Other</i>	
None	0 0 %	0 0 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
1-5	3 5.8 %	3 3.9 %	2 3.5 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	9 4.4 %
6-10	5 9.6 %	10 13 %	6 10.5 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	22 10.7 %
11-15	2 3.8 %	14 18.2 %	12 21.1 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	1 50 %	32 15.6 %
16-20	3 5.8 %	10 13 %	5 8.8 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	19 9.3 %
More than 20	39 75 %	40 51.9 %	31 54.4 %	2 66.7 %	4 44.4 %	4 100 %	1 100 %	1 50 %	122 59.5 %
Total	52 100 %	77 100 %	57 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	205 100 %

Table 9

Which of the following categories best approximates your company's gross revenues for calendar year 2018. Your best estimate will suffice.	Owners' Minority Status							Total	
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial		Other
\$100,000 or less	8 15.7 %	15 19.7 %	24 42.1 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	0 0 %	50 24.6 %
\$100,001 - \$250,000	5 9.8 %	8 10.5 %	7 12.3 %	0 0 %	2 22.2 %	0 0 %	0 0 %	0 0 %	22 10.8 %
\$250,001 - \$500,000	4 7.8 %	11 14.5 %	6 10.5 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	22 10.8 %
\$500,001 - \$750,000	3 5.9 %	4 5.3 %	4 7 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	12 5.9 %
\$750,000 - \$1,000,000	3 5.9 %	10 13.2 %	2 3.5 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	16 7.9 %
\$1,000,001 - \$1,320,000	3 5.9 %	5 6.6 %	3 5.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	11 5.4 %
\$1,320,001 - \$1,500,000	2 3.9 %	2 2.6 %	2 3.5 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	6 3 %
\$1,500,001 - \$5,000,000	10 19.6 %	13 17.1 %	6 10.5 %	1 33.3 %	1 11.1 %	1 25 %	0 0 %	0 0 %	32 15.8 %
\$5,000,001 to \$10,000,000	4 7.8 %	4 5.3 %	1 1.8 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	10 4.9 %
Over \$10 million	6 11.8 %	2 2.6 %	2 3.5 %	1 33.3 %	1 11.1 %	2 50 %	1 100 %	1 50 %	16 7.9 %
Don't Know	3 5.9 %	2 2.6 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	6 3 %
Total	51 100 %	76 100 %	57 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	203 100 %

Table 10

What is your current single project bonding limit?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
\$100,000 or less	7 13.7 %	7 9.1 %	9 15.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	23 11.3 %
\$100,001 - \$250,000	1 2 %	1 1.3 %	3 5.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	5 2.5 %
\$250,001 - \$500,000	1 2 %	4 5.2 %	3 5.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	8 3.9 %
\$500,001 - \$750,000	1 2 %	3 3.9 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	5 2.5 %
\$750,000 - \$1,000,000	2 3.9 %	6 7.8 %	0 0 %	0 0 %	3 33.3 %	0 0 %	0 0 %	0 0 %	11 5.4 %
\$1,000,001 - \$1,320,000	1 2 %	2 2.6 %	3 5.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	6 2.9 %
\$1,320,001 - \$1,500,000	0 0 %	0 0 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
\$1,500,001 - \$5,000,000	3 5.9 %	9 11.7 %	5 8.8 %	0 0 %	0 0 %	2 50 %	0 0 %	0 0 %	19 9.3 %
\$5,000,001 to \$10,000,000	2 3.9 %	3 3.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	5 2.5 %
Over \$10 million	0 0 %	1 1.3 %	1 1.8 %	1 33.3 %	0 0 %	2 50 %	1 100 %	0 0 %	6 2.9 %
Don't Know	8 15.7 %	11 14.3 %	7 12.3 %	0 0 %	3 33.3 %	0 0 %	0 0 %	0 0 %	29 14.2 %
Not Applicable	25 49 %	30 39 %	24 42.1 %	2 66.7 %	3 33.3 %	0 0 %	0 0 %	2 100 %	86 42.2 %
Total	51 100 %	77 100 %	57 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	204 100 %

Table 11

<i>What is the largest single contract your firm has been awarded since July 1, 2013?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
\$100,000 or less	13 25.5 %	26 33.8 %	19 33.3 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	0 0 %	61 29.9 %
\$100,001 - \$250,000	5 9.8 %	13 16.9 %	6 10.5 %	0 0 %	2 22.2 %	0 0 %	0 0 %	0 0 %	26 12.7 %
\$250,001 - \$500,000	3 5.9 %	4 5.2 %	3 5.3 %	0 0 %	1 11.1 %	1 25 %	0 0 %	0 0 %	12 5.9 %
\$500,001 - \$750,000	2 3.9 %	6 7.8 %	7 12.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	15 7.4 %
\$750,001 - \$1,000,000	3 5.9 %	3 3.9 %	2 3.5 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	8 3.9 %
\$1,000,001 - \$1,320,000	4 7.8 %	2 2.6 %	1 1.8 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	8 3.9 %
\$1,320,001 - \$1,500,000	0 0 %	1 1.3 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1 %
\$1,500,001 - \$5,000,000	6 11.8 %	7 9.1 %	6 10.5 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	20 9.8 %
\$5,000,001 to \$10,000,000	1 2 %	3 3.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 2 %
Over \$10 million	0 0 %	1 1.3 %	1 1.8 %	1 33.3 %	1 11.1 %	2 50 %	1 100 %	0 0 %	7 3.4 %
Don't Know	3 5.9 %	3 3.9 %	1 1.8 %	0 0 %	1 11.1 %	0 0 %	0 0 %	1 50 %	9 4.4 %
Not Applicable	11 21.6 %	8 10.4 %	10 17.5 %	1 33.3 %	1 11.1 %	0 0 %	0 0 %	1 50 %	32 15.7 %
Total	51 100 %	77 100 %	57 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	204 100 %

Table 12

<i>Is your company willing to do business with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	51 100 %	74 100 %	55 98.2 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 99.5 %
No	0 0 %	0 0 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
Total	51 100 %	74 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	200 100 %

Table 13

<i>Is your business qualified to do business with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	44 86.3 %	62 83.8 %	44 78.6 %	2 66.7 %	6 66.7 %	3 75 %	1 100 %	2 100 %	164 82 %
No	0 0 %	1 1.4 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1 %
Not sure	7 13.7 %	11 14.9 %	11 19.6 %	1 33.3 %	3 33.3 %	1 25 %	0 0 %	0 0 %	34 17 %
Total	51 100 %	74 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	200 100 %

Table 14

<i>Is your company currently registered as a vendor with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	31 60.8 %	39 52.7 %	27 48.2 %	3 100 %	5 55.6 %	3 75 %	1 100 %	2 100 %	111 55.5 %
No	20 39.2 %	35 47.3 %	29 51.8 %	0 0 %	4 44.4 %	1 25 %	0 0 %	0 0 %	89 44.5 %
Total	51 100 %	74 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	200 100 %

Table 15

<i>Is your company registered to do business with any other government entity (including but not limited to: Hamilton County Government, Hamilton County Schools, Metropolitan Government of Nashville and Davidson County, Georgia Department of Transportation, Tennessee Department of Transportation, State of Tennessee)?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>	<i>Other</i>	
Yes	46 93.9 %	62 83.8 %	43 78.2 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	170 86.3 %
No	3 6.1 %	12 16.2 %	12 21.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	27 13.7 %
Total	49 100 %	74 100 %	55 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	197 100 %

Table 18

<i>[Do not see any benefit in registering.] Why is your company not registered to do business with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	1 3.4 %	0 0 %	1 25 %	0 0 %	0 0 %	0 0 %	2 2.2 %
Not selected	20 100 %	35 100 %	28 96.6 %	0 0 %	3 75 %	1 100 %	0 0 %	0 0 %	87 97.8 %
Total	20 100 %	35 100 %	29 100 %	0 100 %	4 100 %	1 100 %	0 100 %	0 100 %	89 100 %

Table 19

<i>[Do not want to do business with government.] Why is your company not registered to do business with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Not selected	20 100 %	35 100 %	29 100 %	0 0 %	4 100 %	1 100 %	0 0 %	0 0 %	89 100 %
Total	20 100 %	35 100 %	29 100 %	0 100 %	4 100 %	1 100 %	0 100 %	0 100 %	89 100 %

Table 22

<i>[Do not believe firm would be awarded contract.] Why is your company not registered to do business with the City of Chattanooga?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	2 10 %	4 11.4 %	8 27.6 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	14 15.7 %
Not selected	18 90 %	31 88.6 %	21 72.4 %	0 0 %	4 100 %	1 100 %	0 0 %	0 0 %	75 84.3 %
Total	20 100 %	35 100 %	29 100 %	0 100 %	4 100 %	1 100 %	0 100 %	0 100 %	89 100 %

Table 23

[City of Chattanooga Public Projects] From July 1, 2013 through June 30, 2018, how many times has your company submitted bids or proposals for projects as prime contractor on:	Owners' Minority Status								Total
	Non- Minority	Female	African American	Asian American	Hispanic American	Native American	Bi- Racial or Multi- Racial	Other	
None	27 52.9 %	50 68.5 %	41 73.2 %	2 66.7 %	6 66.7 %	3 75 %	0 0 %	0 0 %	129 64.8 %
1-10	15 29.4 %	16 21.9 %	14 25 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	2 100 %	50 25.1 %
11-25	1 2 %	2 2.7 %	1 1.8 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	5 2.5 %
26-50	0 0 %	1 1.4 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
51-100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know/NA	8 15.7 %	4 5.5 %	0 0 %	0 0 %	1 11.1 %	1 25 %	0 0 %	0 0 %	14 7 %
Total	51 100 %	73 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 100 %

Table 24

[Private Sector Projects] From July 1, 2013 through June 30, 2018, how many times has your company submitted bids or proposals for projects as prime contractor on:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
None	15 29.4 %	26 35.6 %	35 63.6 %	3 100 %	5 55.6 %	1 25 %	0 0 %	0 0 %	85 42.9 %
1-10	11 21.6 %	18 24.7 %	8 14.5 %	0 0 %	0 0 %	2 50 %	0 0 %	0 0 %	39 19.7 %
11-25	5 9.8 %	9 12.3 %	9 16.4 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	24 12.1 %
26-50	2 3.9 %	3 4.1 %	2 3.6 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	8 4 %
51-100	3 5.9 %	3 4.1 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	7 3.5 %
Over 100	6 11.8 %	7 9.6 %	1 1.8 %	0 0 %	1 11.1 %	0 0 %	1 100 %	1 50 %	17 8.6 %
Don't Know/NA	9 17.6 %	7 9.6 %	0 0 %	0 0 %	2 22.2 %	0 0 %	0 0 %	0 0 %	18 9.1 %
Total	51 100 %	73 100 %	55 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	198 100 %

Table 25

[Other Public Sector (non-City of Chattanooga Projects)] From July 1, 2013 through June 30, 2018, how many times has your company submitted bids or proposals for projects as prime contractor on:	Owners' Minority Status							Other	Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial		
None	15 29.4 %	32 43.8 %	34 60.7 %	2 66.7 %	7 77.8 %	2 50 %	0 0 %	0 0 %	92 46.2 %
1-10	17 33.3 %	16 21.9 %	13 23.2 %	1 33.3 %	0 0 %	1 25 %	0 0 %	0 0 %	48 24.1 %
11-25	4 7.8 %	10 13.7 %	6 10.7 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	21 10.6 %
26-50	1 2 %	2 2.7 %	1 1.8 %	0 0 %	1 11.1 %	0 0 %	1 100 %	0 0 %	6 3 %
51-100	2 3.9 %	4 5.5 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	7 3.5 %
Over 100	4 7.8 %	5 6.8 %	1 1.8 %	0 0 %	0 0 %	1 25 %	0 0 %	1 50 %	12 6 %
Don't Know/NA	8 15.7 %	4 5.5 %	0 0 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	13 6.5 %
Total	51 100 %	73 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 100 %

Table 26

[City of Chattanooga Public Projects] From July 1, 2013 through June 30, 2018, how many times has your company been awarded contracts to perform as a prime contractor:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
None	34 66.7 %	55 75.3 %	52 92.9 %	2 66.7 %	8 88.9 %	4 100 %	0 0 %	2 100 %	157 78.9 %
1-10	7 13.7 %	12 16.4 %	4 7.1 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	24 12.1 %
11-25	0 0 %	1 1.4 %	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	2 1 %
26-50	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
51-100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know/NA	10 19.6 %	5 6.8 %	0 0 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	16 8 %
Total	51 100 %	73 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 100 %

Table 27

[Private Sector Projects] From July 1, 2013 through June 30, 2018, how many times has your company been awarded contracts to perform as a prime contractor:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
None	21 41.2 %	32 43.8 %	37 66.1 %	3 100 %	4 44.4 %	4 100 %	0 0 %	0 0 %	101 50.8 %
1-10	10 19.6 %	15 20.5 %	15 26.8 %	0 0 %	3 33.3 %	0 0 %	0 0 %	0 0 %	43 21.6 %
11-25	5 9.8 %	8 11 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	14 7 %
26-50	1 2 %	1 1.4 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.5 %
51-100	2 3.9 %	1 1.4 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	5 2.5 %
Over 100	3 5.9 %	6 8.2 %	0 0 %	0 0 %	1 11.1 %	0 0 %	1 100 %	1 50 %	12 6 %
Don't Know/NA	9 17.6 %	10 13.7 %	1 1.8 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	21 10.6 %
Total	51 100 %	73 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 100 %

Table 28

[Other Public Sector (non-City of Chattanooga Projects)] From July 1, 2013 through June 30, 2018, how many times has your company been awarded contracts to perform as a prime contractor:	Owners' Minority Status								Total
	Non- Minority	Female	African American	Asian American	Hispanic American	Native American	Bi- Racial or Multi- Racial	Other	
None	24 47.1 %	39 53.4 %	36 64.3 %	3 100 %	6 66.7 %	4 100 %	0 0 %	0 0 %	112 56.3 %
1-10	11 21.6 %	10 13.7 %	16 28.6 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	38 19.1 %
11-25	1 2 %	8 11 %	2 3.6 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	11 5.5 %
26-50	1 2 %	4 5.5 %	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	6 3 %
51-100	2 3.9 %	1 1.4 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	4 2 %
Over 100	2 3.9 %	4 5.5 %	1 1.8 %	0 0 %	0 0 %	0 0 %	0 0 %	1 50 %	8 4 %
Don't Know/NA	10 19.6 %	7 9.6 %	1 1.8 %	0 0 %	2 22.2 %	0 0 %	0 0 %	0 0 %	20 10.1 %
Total	51 100 %	73 100 %	56 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	199 100 %

Table 29

<i>Approximately how many times did you bid as a subcontractor on a City of Chattanooga project from July 1, 2013 through June 30, 2018?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
None	33 68.8 %	53 72.6 %	42 79.2 %	2 66.7 %	6 66.7 %	2 50 %	1 100 %	0 0 %	139 72 %
1-10	9 18.8 %	14 19.2 %	10 18.9 %	1 33.3 %	2 22.2 %	2 50 %	0 0 %	0 0 %	38 19.7 %
11-25	3 6.2 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.6 %
26-50	0 0 %	2 2.7 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1 %
51-100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know	3 6.2 %	4 5.5 %	1 1.9 %	0 0 %	1 11.1 %	0 0 %	0 0 %	2 100 %	11 5.7 %
Total	48 100 %	73 100 %	53 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	193 100 %

Table 30

<i>Approximately how many times did you serve as a subcontractor on a City of Chattanooga project from July 1, 2013 through June 30, 2018?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
None	38 79.2 %	59 80.8 %	50 94.3 %	3 100 %	7 77.8 %	4 100 %	1 100 %	1 50 %	163 84.5 %
1-10	6 12.5 %	12 16.4 %	3 5.7 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	22 11.4 %
11-25	1 2.1 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
26-50	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
51-100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know	3 6.2 %	2 2.7 %	0 0 %	0 0 %	1 11.1 %	0 0 %	0 0 %	1 50 %	7 3.6 %
Total	48 100 %	73 100 %	53 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	193 100 %

Table 31

[Excessive experience requirements] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	5 10.6 %	5 7.1 %	10 19.2 %	0 0 %	1 11.1 %	0 0 %	0 0 %	0 0 %	21 11.2 %
Not selected	42 89.4 %	65 92.9 %	42 80.8 %	3 100 %	8 88.9 %	4 100 %	1 100 %	2 100 %	167 88.8 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 32

[Performance bond requirements] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	3 6.4 %	4 5.7 %	7 13.5 %	1 33.3 %	1 11.1 %	0 0 %	0 0 %	0 0 %	16 8.5 %
Not selected	44 93.6 %	66 94.3 %	45 86.5 %	2 66.7 %	8 88.9 %	4 100 %	1 100 %	2 100 %	172 91.5 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 33

<i>[Excessive paperwork] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i>	<i>Owners' Minority Status</i>							<i>Total</i>	
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>		<i>Other</i>
Yes	4 8.5 %	6 8.6 %	8 15.4 %	1 33.3 %	4 44.4 %	1 25 %	0 0 %	0 0 %	24 12.8 %
Not selected	43 91.5 %	64 91.4 %	44 84.6 %	2 66.7 %	5 55.6 %	3 75 %	1 100 %	2 100 %	164 87.2 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 34

<p><i>[Bid bond requirements]</i> <i>The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i></p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Yes</p>	<p>6 12.8 %</p>	<p>2 2.9 %</p>	<p>4 7.7 %</p>	<p>1 33.3 %</p>	<p>1 11.1 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>14 7.4 %</p>
<p>Not selected</p>	<p>41 87.2 %</p>	<p>68 97.1 %</p>	<p>48 92.3 %</p>	<p>2 66.7 %</p>	<p>8 88.9 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>174 92.6 %</p>
<p>Total</p>	<p>47 100 %</p>	<p>70 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>188 100 %</p>

Table 35

<i>[Financing] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	1 1.4 %	9 17.3 %	1 33.3 %	1 11.1 %	0 0 %	0 0 %	0 0 %	12 6.4 %
Not selected	47 100 %	69 98.6 %	43 82.7 %	2 66.7 %	8 88.9 %	4 100 %	1 100 %	2 100 %	176 93.6 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 36

<i>[Insurance requirements] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	2 4.3 %	2 2.9 %	2 3.8 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	0 0 %	9 4.8 %
Not selected	45 95.7 %	68 97.1 %	50 96.2 %	2 66.7 %	7 77.8 %	4 100 %	1 100 %	2 100 %	179 95.2 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 37

[Bid specifications] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	4 8.5 %	11 15.7 %	9 17.3 %	1 33.3 %	4 44.4 %	1 25 %	0 0 %	1 50 %	31 16.5 %
Not selected	43 91.5 %	59 84.3 %	43 82.7 %	2 66.7 %	5 55.6 %	3 75 %	1 100 %	1 50 %	157 83.5 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 38

[Lack of access to competitive supplier pricing] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chatianooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	6 12.8 %	7 10 %	10 19.2 %	1 33.3 %	0 0 %	1 25 %	1 100 %	0 0 %	26 13.8 %
Not selected	41 87.2 %	63 90 %	42 80.8 %	2 66.7 %	9 100 %	3 75 %	0 0 %	2 100 %	162 86.2 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 39

<p><i>[Limited time given to prepare bid package or quote] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i></p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Yes</p>	<p>6 12.8 %</p>	<p>9 12.9 %</p>	<p>9 17.3 %</p>	<p>1 33.3 %</p>	<p>3 33.3 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>29 15.4 %</p>
<p>Not selected</p>	<p>41 87.2 %</p>	<p>61 87.1 %</p>	<p>43 82.7 %</p>	<p>2 66.7 %</p>	<p>6 66.7 %</p>	<p>3 75 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>159 84.6 %</p>
<p>Total</p>	<p>47 100 %</p>	<p>70 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>188 100 %</p>

Table 40

<p><i>[Limited knowledge of purchasing/contracting policies and procedures] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i></p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Yes</p>	<p>5 10.6 %</p>	<p>10 14.3 %</p>	<p>11 21.2 %</p>	<p>1 33.3 %</p>	<p>2 22.2 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>30 16 %</p>
<p>Not selected</p>	<p>42 89.4 %</p>	<p>60 85.7 %</p>	<p>41 78.8 %</p>	<p>2 66.7 %</p>	<p>7 77.8 %</p>	<p>3 75 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>158 84 %</p>
<p>Total</p>	<p>47 100 %</p>	<p>70 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>188 100 %</p>

Table 41

[Language barriers] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	0 0 %	1 33.3 %	1 11.1 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Not selected	47 100 %	70 100 %	52 100 %	2 66.7 %	8 88.9 %	4 100 %	1 100 %	2 100 %	186 98.9 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 42

[Lack of experience] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	1 1.4 %	4 7.7 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	5 2.7 %
Not selected	47 100 %	69 98.6 %	48 92.3 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	183 97.3 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 43

[Lack of personnel] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	1 1.4 %	1 1.9 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.6 %
Not selected	47 100 %	69 98.6 %	51 98.1 %	2 66.7 %	9 100 %	4 100 %	1 100 %	2 100 %	185 98.4 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 44

[Contract too large] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status							Total	
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial		Other
Yes	1 2.1 %	1 1.4 %	6 11.5 %	1 33.3 %	2 22.2 %	0 0 %	0 0 %	0 0 %	11 5.9 %
Not selected	46 97.9 %	69 98.6 %	46 88.5 %	2 66.7 %	7 77.8 %	4 100 %	1 100 %	2 100 %	177 94.1 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 45

[Contract too expensive to bid] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	1 2.1 %	2 2.9 %	7 13.5 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	11 5.9 %
Not selected	46 97.9 %	68 97.1 %	45 86.5 %	2 66.7 %	9 100 %	4 100 %	1 100 %	2 100 %	177 94.1 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 46

[Informal networks] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)	Owners' Minority Status							Total	
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial		Other
Yes	3 6.4 %	5 7.1 %	8 15.4 %	1 33.3 %	0 0 %	2 50 %	0 0 %	0 0 %	19 10.1 %
Not selected	44 93.6 %	65 92.9 %	44 84.6 %	2 66.7 %	9 100 %	2 50 %	1 100 %	2 100 %	169 89.9 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 48

<p><i>[Not certified]</i> The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Yes</p>	<p>0 0 %</p>	<p>2 2.9 %</p>	<p>4 7.7 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>6 3.2 %</p>
<p>Not selected</p>	<p>47 100 %</p>	<p>68 97.1 %</p>	<p>48 92.3 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>182 96.8 %</p>
<p>Total</p>	<p>47 100 %</p>	<p>70 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>188 100 %</p>

Table 49

<p><i>[Unfair competition with large firms] The following is a list of things that may prevent companies from bidding or obtaining work on a project. In your experience, have any of the following been a barrier to your firm obtaining work on projects on City of Chattanooga projects? (check all that apply)</i></p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Yes</p>	<p>7 14.9 %</p>	<p>18 25.7 %</p>	<p>17 32.7 %</p>	<p>1 33.3 %</p>	<p>3 33.3 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>47 25 %</p>
<p>Not selected</p>	<p>40 85.1 %</p>	<p>52 74.3 %</p>	<p>35 67.3 %</p>	<p>2 66.7 %</p>	<p>6 66.7 %</p>	<p>3 75 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>141 75 %</p>
<p>Total</p>	<p>47 100 %</p>	<p>70 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>9 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>188 100 %</p>

Table 51

<i>What is the amount of time that it typically takes to receive payment from the City of Chattanooga for your services on City of Chattanooga projects?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Less than 30 days	2 33.3 %	3 25 %	2 50 %	1 100 %	0 0 %	0 0 %	0 0 %	0 0 %	8 33.3 %
30-60 days	3 50 %	8 66.7 %	2 50 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	14 58.3 %
60-90 days	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
90-120 days	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 120 days	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know/NA	1 16.7 %	1 8.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 8.3 %
Total	6 100 %	12 100 %	4 100 %	1 100 %	0 100 %	0 100 %	1 100 %	0 100 %	24 100 %

Table 52

<i>Is your company a certified Minority, Female or Disadvantaged Business Enterprise?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	6 12.8 %	53 75.7 %	46 88.5 %	1 33.3 %	6 66.7 %	4 100 %	1 100 %	0 0 %	117 62.2 %
No	41 87.2 %	17 24.3 %	6 11.5 %	2 66.7 %	3 33.3 %	0 0 %	0 0 %	2 100 %	71 37.8 %
Total	47 100 %	70 100 %	52 100 %	3 100 %	9 100 %	4 100 %	1 100 %	2 100 %	188 100 %

Table 53

[MBE (Minority Business Enterprise)] What is your certification? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	1 16.7 %	7 13.2 %	41 89.1 %	0 0 %	4 66.7 %	4 100 %	1 100 %	0 0 %	58 49.6 %
No	3 50 %	33 62.3 %	4 8.7 %	1 100 %	1 16.7 %	0 0 %	0 0 %	0 0 %	42 35.9 %
Not Applicable	2 33.3 %	13 24.5 %	1 2.2 %	0 0 %	1 16.7 %	0 0 %	0 0 %	0 0 %	17 14.5 %
Total	6 100 %	53 100 %	46 100 %	1 100 %	6 100 %	4 100 %	1 100 %	0 100 %	117 100 %

Table 54

[WBE (Females Business Enterprise)] What is your certification? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	1 16.7 %	47 88.7 %	16 34.8 %	0 0 %	1 16.7 %	0 0 %	0 0 %	0 0 %	65 55.6 %
No	3 50 %	5 9.4 %	21 45.7 %	1 100 %	3 50 %	3 75 %	1 100 %	0 0 %	37 31.6 %
Not Applicable	2 33.3 %	1 1.9 %	9 19.6 %	0 0 %	2 33.3 %	1 25 %	0 0 %	0 0 %	15 12.8 %
Total	6 100 %	53 100 %	46 100 %	1 100 %	6 100 %	4 100 %	1 100 %	0 100 %	117 100 %

Table 55

<i>[DBE (Disadvantaged Business Enterprise)] What is your certification? (Check all that apply)</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non- Minority	Female	African American	Asian American	Hispanic American	Native American	Bi- Racial or Multi- Racial	Other	
Yes	5 83.3 %	26 49.1 %	31 67.4 %	1 100 %	3 50 %	3 75 %	1 100 %	0 0 %	70 59.8 %
No	1 16.7 %	17 32.1 %	10 21.7 %	0 0 %	3 50 %	1 25 %	0 0 %	0 0 %	32 27.4 %
Not Applicable	0 0 %	10 18.9 %	5 10.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	15 12.8 %
Total	6 100 %	53 100 %	46 100 %	1 100 %	6 100 %	4 100 %	1 100 %	0 100 %	117 100 %

Table 56

<i>[I do not understand the certification process] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non- Minority	Female	African American	Asian American	Hispanic American	Native American	Bi- Racial or Multi- Racial	Other	
Yes	7 17.1 %	5 29.4 %	3 50 %	0 0 %	2 66.7 %	0 0 %	0 0 %	0 0 %	17 23.9 %
Not selected	34 82.9 %	12 70.6 %	3 50 %	2 100 %	1 33.3 %	0 0 %	0 0 %	2 100 %	54 76.1 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 57

[We do not meet one or more of the requirements for certification] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	27 65.9 %	2 11.8 %	0 0 %	1 50 %	0 0 %	0 0 %	0 0 %	1 50 %	31 43.7 %
Not selected	14 34.1 %	15 88.2 %	6 100 %	1 50 %	3 100 %	0 0 %	0 0 %	1 50 %	40 56.3 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 58

[Certification is too expensive] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	1 16.7 %	1 50 %	0 0 %	0 0 %	0 0 %	0 0 %	2 2.8 %
Not selected	41 100 %	17 100 %	5 83.3 %	1 50 %	3 100 %	0 0 %	0 0 %	2 100 %	69 97.2 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 59

[I do not want the City of Chattanooga to have information about my company] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Not selected	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 0 %	0 0 %	2 100 %	71 100 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 60

[I have not had time to get certified/the process is too time-consuming] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	2 4.9 %	7 41.2 %	4 66.7 %	1 50 %	2 66.7 %	0 0 %	0 0 %	0 0 %	16 22.5 %
Not selected	39 95.1 %	10 58.8 %	2 33.3 %	1 50 %	1 33.3 %	0 0 %	0 0 %	2 100 %	55 77.5 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 61

[Certification does not benefit and/or will negatively impact my company] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	1 2.4 %	1 5.9 %	0 0 %	1 50 %	0 0 %	0 0 %	0 0 %	0 0 %	3 4.2 %
Not selected	40 97.6 %	16 94.1 %	6 100 %	1 50 %	3 100 %	0 0 %	0 0 %	2 100 %	68 95.8 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 62

[Do not understand how certification can benefit my firm.] Why is your company not certified as a Minority, Female or Disadvantaged Business Enterprise? (Check all that apply)	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	7 17.1 %	4 23.5 %	3 50 %	1 50 %	1 33.3 %	0 0 %	0 0 %	0 0 %	16 22.5 %
Not selected	34 82.9 %	13 76.5 %	3 50 %	1 50 %	2 66.7 %	0 0 %	0 0 %	2 100 %	55 77.5 %
Total	41 100 %	17 100 %	6 100 %	2 100 %	3 100 %	0 100 %	0 100 %	2 100 %	71 100 %

Table 63

[Business start-up loan?] Between July 1, 2013 through June 30, 2018, did your company apply and receive any of the following?	Owners' Minority Status							Total	
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial		Other
Never Applied	43 97.7 %	67 97.1 %	48 92.3 %	3 100 %	7 87.5 %	4 100 %	1 100 %	2 100 %	175 95.6 %
Applied, Never Approved	0 0 %	1 1.4 %	2 3.8 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	4 2.2 %
Applied, Some Approved	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Applied, All Approved	1 2.3 %	1 1.4 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 2.2 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 64

[Operating capital loan?] Between July 1, 2013 through June 30, 2018, did your company apply and receive any of the following?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Never Applied	33 75 %	50 72.5 %	42 80.8 %	2 66.7 %	5 62.5 %	2 50 %	1 100 %	0 0 %	135 73.8 %
Applied, Never Approved	0 0 %	1 1.4 %	2 3.8 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	4 2.2 %
Applied, Some Approved	1 2.3 %	2 2.9 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	5 2.7 %
Applied, All Approved	10 22.7 %	16 23.2 %	6 11.5 %	1 33.3 %	2 25 %	2 50 %	0 0 %	2 100 %	39 21.3 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 65

[Equipment loan?] Between July 1, 2013 through June 30, 2018, did your company apply and receive any of the following?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Never Applied	35 79.5 %	47 68.1 %	47 90.4 %	3 100 %	6 75 %	2 50 %	0 0 %	1 50 %	141 77 %
Applied, Never Approved	0 0 %	1 1.4 %	0 0 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Applied, Some Approved	0 0 %	0 0 %	1 1.9 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	2 1.1 %
Applied, All Approved	9 20.5 %	21 30.4 %	4 7.7 %	0 0 %	1 12.5 %	1 25 %	1 100 %	1 50 %	38 20.8 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 66

[Commercial/Professional liability insurance?] Between July 1, 2013 through June 30, 2018, did your company apply and receive any of the following?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Never Applied	16 36.4 %	14 20.3 %	19 36.5 %	1 33.3 %	2 25 %	1 25 %	0 0 %	0 0 %	53 29 %
Applied, Never Approved	0 0 %	1 1.4 %	1 1.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Applied, Some Approved	0 0 %	0 0 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Applied, All Approved	28 63.6 %	54 78.3 %	30 57.7 %	2 66.7 %	6 75 %	3 75 %	1 100 %	2 100 %	126 68.9 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 67

<i>What was the largest commercial loan you received from July 1, 2013 through June 30, 2018?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>	<i>Other</i>	
\$50,000 or less	9 20.5 %	13 18.8 %	6 11.8 %	0 0 %	2 25 %	0 0 %	0 0 %	0 0 %	30 16.5 %
\$50,001 - \$100,000	2 4.5 %	9 13 %	2 3.9 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	14 7.7 %
\$100,001 - \$300,000	2 4.5 %	11 15.9 %	5 9.8 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	19 10.4 %
\$300,001 - \$500,000	4 9.1 %	4 5.8 %	0 0 %	0 0 %	1 12.5 %	1 25 %	0 0 %	0 0 %	10 5.5 %
\$500,001 - \$1,000,000	0 0 %	1 1.4 %	3 5.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 2.2 %
\$1,000,001 - \$3,000,000	3 6.8 %	0 0 %	0 0 %	0 0 %	0 0 %	2 50 %	1 100 %	1 50 %	7 3.8 %
\$3,000,001 - \$5,000,000	0 0 %	1 1.4 %	1 2 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1.1 %
\$5,000,001 to \$10,000,000	0 0 %	0 0 %	0 0 %	0 0 %	1 12.5 %	0 0 %	0 0 %	0 0 %	1 0.5 %
over \$10,000,000	0 0 %	0 0 %	0 0 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.5 %
Don't Know/NA	24 54.5 %	30 43.5 %	34 66.7 %	2 66.7 %	2 25 %	1 25 %	0 0 %	1 50 %	94 51.6 %
Total	44 100 %	69 100 %	51 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	182 100 %

Table 68

<i>How many times have you been denied a commercial (business) bank loan from July 1, 2013 through June 30, 2018?</i>	<i>Owners' Minority Status</i>							<i>Total</i>	
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>		<i>Other</i>
None	33 75 %	54 78.3 %	34 65.4 %	1 33.3 %	6 75 %	3 75 %	1 100 %	1 50 %	133 72.7 %
1-10	2 4.5 %	6 8.7 %	8 15.4 %	0 0 %	1 12.5 %	1 25 %	0 0 %	0 0 %	18 9.8 %
11-25	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
26-50	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
51-100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Over 100	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Don't Know/NA	9 20.5 %	9 13 %	10 19.2 %	2 66.7 %	1 12.5 %	0 0 %	0 0 %	1 50 %	32 17.5 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 69

[Business start-up loan?] Of the items your company was denied, what was the denial reason?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Insufficient Documentation	0 0 %	1 100 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 25 %
Insufficient Business History	0 0 %	0 0 %	1 50 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 25 %
Confusion about Process	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Credit History	0 0 %	0 0 %	1 50 %	0 0 %	1 100 %	0 0 %	0 0 %	0 0 %	2 50 %
Don't Know	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
N/A	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Total	0 100 %	1 100 %	2 100 %	0 100 %	1 100 %	0 100 %	0 100 %	0 100 %	4 100 %

Table 70

[Operating capital loan?] Of the items your company was denied, what was the denial reason?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Insufficient Documentation	0 0 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 11.1 %
Insufficient Business History	1 100 %	0 0 %	1 25 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 22.2 %
Confusion about Process	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %
Credit History	0 0 %	0 0 %	1 25 %	0 0 %	1 100 %	0 0 %	0 0 %	0 0 %	2 22.2 %
Don't Know	0 0 %	2 66.7 %	1 25 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	3 33.3 %
N/A	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	1 11.1 %
Total	1 100 %	3 100 %	4 100 %	0 100 %	1 100 %	0 100 %	0 100 %	0 100 %	9 100 %

Table 73

<i>Do you feel as though you experienced discriminatory behavior from the private sector (i.e., non-governmental entities) from July 1, 2013 through June 30, 2018?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Yes	4 9.1 %	11 15.9 %	20 38.5 %	2 66.7 %	1 12.5 %	2 50 %	0 0 %	0 0 %	40 21.9 %
No	31 70.5 %	44 63.8 %	22 42.3 %	1 33.3 %	6 75 %	2 50 %	1 100 %	0 0 %	107 58.5 %
Don't Know	9 20.5 %	14 20.3 %	10 19.2 %	0 0 %	1 12.5 %	0 0 %	0 0 %	2 100 %	36 19.7 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	183 100 %

Table 74

From July 1, 2013 through June 30, 2018, how often has your company experienced any racial, gender, or ethnic discrimination behavior from the City of Chattanooga or its personnel?	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Never	40 90.9 %	60 87 %	33 63.5 %	3 100 %	5 71.4 %	2 50 %	1 100 %	1 50 %	145 79.7 %
Seldom	0 0 %	0 0 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Often	1 2.3 %	0 0 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.6 %
Very Often	0 0 %	1 1.4 %	1 1.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	2 1.1 %
Don't Know	3 6.8 %	8 11.6 %	14 26.9 %	0 0 %	2 28.6 %	2 50 %	0 0 %	1 50 %	30 16.5 %
Total	44 100 %	69 100 %	52 100 %	3 100 %	7 100 %	4 100 %	1 100 %	2 100 %	182 100 %

Table 75

<i>Do you believe there is an informal network of prime and subcontractors doing business with the City of Chattanooga that monopolize the public contracting process?</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	<i>Non-Minority</i>	<i>Female</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic American</i>	<i>Native American</i>	<i>Bi-Racial or Multi-Racial</i>	<i>Other</i>	
Yes	16 37.2 %	30 43.5 %	33 63.5 %	1 33.3 %	3 37.5 %	3 75 %	0 0 %	1 50 %	87 47.8 %
No	27 62.8 %	39 56.5 %	19 36.5 %	2 66.7 %	5 62.5 %	1 25 %	1 100 %	1 50 %	95 52.2 %
Total	43 100 %	69 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	182 100 %

Table 76

[My company's exclusion from this informal network has prevented us from winning contracts with the City of Chattanooga.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Strongly Disagree	0 0 %	2 7.4 %	2 6.1 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 4.8 %
Disagree	2 12.5 %	1 3.7 %	3 9.1 %	0 0 %	0 0 %	1 33.3 %	0 0 %	1 100 %	8 9.5 %
Neither Agree nor Disagree	5 31.2 %	11 40.7 %	12 36.4 %	1 100 %	0 0 %	0 0 %	0 0 %	0 0 %	29 34.5 %
Agree	7 43.8 %	10 37 %	10 30.3 %	0 0 %	2 66.7 %	1 33.3 %	0 0 %	0 0 %	30 35.7 %
Strongly Agree	2 12.5 %	3 11.1 %	6 18.2 %	0 0 %	1 33.3 %	1 33.3 %	0 0 %	0 0 %	13 15.5 %
Total	16 100 %	27 100 %	33 100 %	1 100 %	3 100 %	3 100 %	0 100 %	1 100 %	84 100 %

Table 77

<p><i>[Double standards in qualifications and work performance make it more difficult for minority, and Females-owned businesses to win bids or contracts.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:</i></p>	<p><i>Owners' Minority Status</i></p>								<p><i>Total</i></p>
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>	<p>Other</p>	
<p>Strongly Disagree</p>	<p>6 14.6 %</p>	<p>4 6.2 %</p>	<p>3 5.8 %</p>	<p>1 33.3 %</p>	<p>1 12.5 %</p>	<p>0 0 %</p>	<p>1 100 %</p>	<p>0 0 %</p>	<p>16 9.1 %</p>
<p>Disagree</p>	<p>5 12.2 %</p>	<p>12 18.5 %</p>	<p>7 13.5 %</p>	<p>0 0 %</p>	<p>1 12.5 %</p>	<p>2 50 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>27 15.3 %</p>
<p>Neither Agree nor Disagree</p>	<p>27 65.9 %</p>	<p>31 47.7 %</p>	<p>15 28.8 %</p>	<p>1 33.3 %</p>	<p>3 37.5 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>2 100 %</p>	<p>79 44.9 %</p>
<p>Agree</p>	<p>2 4.9 %</p>	<p>13 20 %</p>	<p>14 26.9 %</p>	<p>0 0 %</p>	<p>2 25 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>32 18.2 %</p>
<p>Strongly Agree</p>	<p>1 2.4 %</p>	<p>5 7.7 %</p>	<p>13 25 %</p>	<p>1 33.3 %</p>	<p>1 12.5 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>22 12.5 %</p>
<p>Total</p>	<p>41 100 %</p>	<p>65 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>8 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>176 100 %</p>

Table 78

[The City of Chattanooga is generally accommodating to the language needs of its vendor community.] Please tell us if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Strongly Disagree	0 0 %	0 0 %	0 0 %	1 33.3 %	0 0 %	0 0 %	0 0 %	0 0 %	1 0.6 %
Disagree	0 0 %	1 1.6 %	2 3.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	3 1.7 %
Neither Agree nor Disagree	27 64.3 %	48 75 %	43 82.7 %	2 66.7 %	5 62.5 %	3 75 %	1 100 %	1 50 %	130 73.9 %
Agree	11 26.2 %	12 18.8 %	7 13.5 %	0 0 %	1 12.5 %	0 0 %	0 0 %	1 50 %	32 18.2 %
Strongly Agree	4 9.5 %	3 4.7 %	0 0 %	0 0 %	2 25 %	1 25 %	0 0 %	0 0 %	10 5.7 %
Total	42 100 %	64 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	176 100 %

Table 79

[Sometimes, a prime contractor will contact a minority or, Female-owned business to ask for quotes but never give the proposal sufficient review to consider giving that firm the award.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:	Owners' Minority Status								Total
	Non-Minority	Female	African America n	Asian America n	Hispanic America n	Native America n	Bi-Racial or Multi-Racial	Other	
Strongly Disagree	2 4.8 %	1 1.6 %	5 9.6 %	0 0 %	0 0 %	1 25 %	0 0 %	0 0 %	9 5.1 %
Disagree	1 2.4 %	2 3.2 %	2 3.8 %	1 33.3 %	0 0 %	0 0 %	1 100 %	0 0 %	7 4 %
Neither Agree nor Disagree	36 85.7 %	35 55.6 %	24 46.2 %	1 33.3 %	4 50 %	1 25 %	0 0 %	1 50 %	102 58.3 %
Agree	3 7.1 %	16 25.4 %	14 26.9 %	0 0 %	3 37.5 %	1 25 %	0 0 %	1 50 %	38 21.7 %
Strongly Agree	0 0 %	9 14.3 %	7 13.5 %	1 33.3 %	1 12.5 %	1 25 %	0 0 %	0 0 %	19 10.9 %
Total	42 100 %	63 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	175 100 %

Table 80

<i>[Sometimes, a prime contractor will include a minority or, Female subcontractor on a bid to meet participation goals, then drop the company as a subcontractor after winning the award.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:</i>	<i>Owners' Minority Status</i>								<i>Total</i>
	Non-Minority	Female	African America	Asian America	Hispanic America	Native America	Bi-Racial or Multi-Racial	Other	
Strongly Disagree	2 4.8 %	2 3.1 %	2 3.8 %	0 0 %	0 0 %	2 50 %	0 0 %	0 0 %	8 4.5 %
Disagree	2 4.8 %	1 1.6 %	2 3.8 %	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	6 3.4 %
Neither Agree nor Disagree	37 88.1 %	43 67.2 %	23 44.2 %	2 66.7 %	5 62.5 %	1 25 %	0 0 %	1 50 %	112 63.6 %
Agree	1 2.4 %	9 14.1 %	15 28.8 %	0 0 %	2 25 %	0 0 %	0 0 %	1 50 %	28 15.9 %
Strongly Agree	0 0 %	9 14.1 %	10 19.2 %	1 33.3 %	1 12.5 %	1 25 %	0 0 %	0 0 %	22 12.5 %
Total	42 100 %	64 100 %	52 100 %	3 100 %	8 100 %	4 100 %	1 100 %	2 100 %	176 100 %

Table 81

<p><i>[In general, M/WBE's tend to be viewed by Non-M/WBE businesses as less competent than non-minority male-owned businesses.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:</i></p>	<p><i>Owners' Minority Status</i></p>							<p><i>Total</i></p>	
	<p>Non-Minority</p>	<p>Female</p>	<p>African American</p>	<p>Asian American</p>	<p>Hispanic American</p>	<p>Native American</p>	<p>Bi-Racial or Multi-Racial</p>		<p>Other</p>
<p>Strongly Disagree</p>	<p>3 7.3 %</p>	<p>1 1.6 %</p>	<p>2 3.8 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>7 4 %</p>
<p>Disagree</p>	<p>3 7.3 %</p>	<p>6 9.4 %</p>	<p>1 1.9 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>1 50 %</p>	<p>11 6.3 %</p>
<p>Neither Agree nor Disagree</p>	<p>33 80.5 %</p>	<p>32 50 %</p>	<p>17 32.7 %</p>	<p>2 66.7 %</p>	<p>4 50 %</p>	<p>2 50 %</p>	<p>1 100 %</p>	<p>1 50 %</p>	<p>92 52.6 %</p>
<p>Agree</p>	<p>2 4.9 %</p>	<p>16 25 %</p>	<p>21 40.4 %</p>	<p>1 33.3 %</p>	<p>2 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>42 24 %</p>
<p>Strongly Agree</p>	<p>0 0 %</p>	<p>9 14.1 %</p>	<p>11 21.2 %</p>	<p>0 0 %</p>	<p>2 25 %</p>	<p>1 25 %</p>	<p>0 0 %</p>	<p>0 0 %</p>	<p>23 13.1 %</p>
<p>Total</p>	<p>41 100 %</p>	<p>64 100 %</p>	<p>52 100 %</p>	<p>3 100 %</p>	<p>8 100 %</p>	<p>4 100 %</p>	<p>1 100 %</p>	<p>2 100 %</p>	<p>175 100 %</p>

Table 82

[I believe that some non-minority prime contractors only utilize M/WBE companies when required to do so by the City of Chattanooga.] Please tell us if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with each of the following statements:	Owners' Minority Status								Total
	Non-Minority	Female	African American	Asian American	Hispanic American	Native American	Bi-Racial or Multi-Racial	Other	
Strongly Disagree	1 2.4 %	3 4.6 %	3 5.8 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	7 4 %
Disagree	1 2.4 %	2 3.1 %	1 1.9 %	0 0 %	0 0 %	0 0 %	0 0 %	0 0 %	4 2.3 %
Neither Agree nor Disagree	32 78 %	32 49.2 %	18 34.6 %	2 66.7 %	4 50 %	1 33.3 %	1 100 %	1 50 %	91 52 %
Agree	4 9.8 %	15 23.1 %	14 26.9 %	0 0 %	2 25 %	1 33.3 %	0 0 %	1 50 %	37 21.1 %
Strongly Agree	3 7.3 %	13 20 %	16 30.8 %	1 33.3 %	2 25 %	1 33.3 %	0 0 %	0 0 %	36 20.6 %
Total	41 100 %	65 100 %	52 100 %	3 100 %	8 100 %	3 100 %	1 100 %	2 100 %	175 100 %

Appendix J
Organizations Contacted for the
Disparity Study

APPENDIX J – ORGANIZATIONS CONTACTED FOR THE DISPARITY STUDY

Organization Name
Chattanooga Area Chamber of Commerce
Urban League
LAUNCH TN
The Company Lab (CoLab)
Chattanooga NAACP
Tennessee Small Business Development Center-Chattanooga State
Hamilton County INCubator - Chattanooga Chamber
Greenspaces
La Paz and Compania
The Enterprise Center
AGC of East Tennessee
Associated Builders and Contractors - East Tennessee
Associated Builders and Contractors - Middle Tennessee

Appendix K

Study Definitions

APPENDIX K – STUDY DEFINITIONS

Anecdotal – A reported personal experience or encounter, retold through interview, testimony, email, or survey. Not necessarily verified or based on research.

Availability – A calculated percentage computed by dividing the number of businesses in each study group by the total number of businesses in the pool for that work category.

Awards – For Prime Contractors, the Awards were measured through contracts and purchase orders. For Subcontractors, the awards were measured through a prime vendor questionnaire that was sent to all prime contractors (except goods where there are typically no subcontractors).

City of Richmond v. J.A. Croson Company 488 U.S. 469 (1989) (“Croson”) – Laws that, on their face, favor one class of citizens over another, may run afoul of the Equal Protection Clause of the 14 Amendment of the U.S. Constitution even if those laws are meant to remedy discrimination. Such laws, including those that create race conscious programs, must withstand judicial “strict scrutiny” or they will be dismantled. In its Croson decision, the Supreme Court ruled that the City of Richmond’s Minority Business Enterprise (hereinafter “MBE”) program failed to satisfy the requirements of “strict scrutiny” review under the 14th Amendment “Strict scrutiny” review involves two co-equal considerations to determine whether a race conscious program can withstand the Strict Scrutiny: First, the need to demonstrate a compelling governmental interest (which may be established through periodic disparity studies); Second, implementation of a program or method narrowly-tailored to achieve/remedy the compelling interest. In Croson, the Supreme Court concluded that the City of Richmond failed to show that its minority set-aside program was “necessary” to remedy the effects of discrimination in the marketplace.

Disparity Index – A statistical measure demonstrated by the failure to meet parity between availability and Utilization. Disparity is calculated by comparing the utilization percentage to the availability percentage of each race/gender/ethnic group. Will result in either overutilization, underutilization or parity.

Disparity Study (“Study”) – A tool, identified by the Supreme Court as necessary for satisfying the strict scrutiny threshold for race conscious programs and demonstrating the compelling governmental interest by “factual predicate” that identifies discrimination and a narrowly tailored remedy to redress any finding of discrimination. Must adhere to the legal requirements of U.S Supreme Court decisions like City of Richmond v. J.A. Croson Company, and its progeny. Not designed to be an analysis of any current remedial programs but an analysis of race, ethnicity, and gender status and how it affects participation in the procurement process and in the marketplace.

Fiscal Year (“FY”) – The business year for the City of Chattanooga for purchasing and accounting purposes. Measured by the City of Chattanooga from July 1 – June 30th. The study period for this study is FY 2014-2018.

Good Faith Efforts (“GFE”) – The documentation and verification process to ensure that prime contractors are soliciting and negotiating with MWBEs in “good faith” for potential subcontracting opportunities.

Minority Business Enterprise (“MBE”) – any for-profit business owned and controlled by an individual or group of individuals who have at least 51% stake in ownership and identify with one of the following ethnic minority groups:

- African American
- Asian American
- Hispanic American

➤ Native American

MWBE – For profit businesses owned and controlled by a person or group of individuals who have at least 51% stake in ownership and identify as an MBE or Caucasian Female.

Non-MWBE – Any for profit business owned and controlled by a person or group of individuals who have at least 51% stake in ownership and identify as either Caucasian Males or is Publicly Traded with no majority owner of which to attribute an ethnicity. Not-for-profit and governmental entities are not included as Non-MWBEs.

Caucasian Female – Any for profit business owned and controlled by an individual or group of individuals who have at least 51% stake in ownership and identify as Non-Hispanic Caucasian Females (also “Females”)

Overutilization – The measure by which the utilization percentage is higher than the availability percentage and the Disparity Index is above 100. In order to be statistically significantly overutilized, the Disparity Index must be 110 or more.

Parity – The absence of disparity, demonstrated by the utilization percentage being equal to availability percentage and the Disparity Index equaling 100.

Prime Contractor – A business who has entered into direct contractual relationship with the City of Chattanooga, or other public or private entity to provide a good, service, or perform a scope of services.

Qualitative Analysis – Also known as anecdotal analysis. Referring to a measurement of quality (ex. how good over how much). Typified through collection and analysis of constituents’ anecdotal impressions, such as interviews, public hearings, focus groups, and other forms of commentary.

Quantitative Analysis – Commonly referred to as statistical analysis. Referring to a measurement of quantity over quality (ex. how much over how good). Typified by analysis of mathematical or statistical modeling.

Regression Analysis – Statistical measure used to determine whether the race, ethnicity or gender status of a business owner are an impediment in contracting in the Chattanooga marketplace and whether but for these, they would have the capacity to provide services on a higher level than is currently utilized.

Relevant Market – A statistical measure, determined by where The City of Chattanooga has spent at least 75% of its prime awards dollars. All aspects of the availability, utilization, and disparity analysis will encompass only firms located within the relevant market, by work category, to ensure that any resulting program is “narrowly tailored” per Croson standards.

Strict Scrutiny – The highest level of judicial scrutiny used in determining the constitutionality of laws.

Study Period – The period between which all City contract awards are subject to study analysis. For this study it has been defined as July 1, 2013 through June 30th, 2018 (7/1/2013 – 6/30/2018)

Subcontractor – A business who has entered into a direct contractual relationship with a Prime Contractor to either provide a good or service or perform a full scope, or portion of a scope of services.

Threshold Analysis – A measure of all awards (contracts and purchase orders) made by the City of Chattanooga during in the study period, disaggregated by contract size to determine the level of contracting done by the City of Chattanooga. Used to determine if a separate availability measure is necessary for Prime and Subcontractors.

Utilization – A review of The City of Chattanooga’s Awards to determine where and with whom Prime Contractor and Subcontractor were made. The analysis is conducted both with regard to the number of firms and the dollars in each race, ethnicity, gender group during each year of the Study.

Work Categories – The work categories for services which are purchased by The City of Chattanooga and are utilized by The City of Chattanooga (for primes) and The City of Chattanooga primes (for subcontractors). For the purpose of this study, contract data was collected and analyzed in the following business sectors.

- Construction
- Architecture and Engineering (“A/E”)
- Professional Services
- Other Services
- Goods

Underutilization – The measure by which the utilization percentage is less than the availability percentage and the Disparity Index is below 100. In order to be statistically significantly underutilized, the Disparity Index must be 80 or less.

Appendix L
Commodity Code Classifications for the
Disparity Study

APPENDIX L – COMMODITY CODE CLASSIFICATIONS FOR THE DISPARITY STUDY

NIGP 3	Commodity Description	Work Category
005	ABRASIVES	Goods & Supplies
010	ACOUSTICAL TILE, INSULATING MATERIALS, AND SUPPLIES	Goods & Supplies
015	ADDRESSING, COPYING, MIMEOGRAPH, AND SPIRIT DUPLICATING MACHINE SUPPLIES: CHEMICALS, INKS, PAPER, ETC.	Goods & Supplies
019	AGRICULTURAL CROPS AND GRAINS INCLUDING FRUITS, MELONS, NUTS, AND VEGETABLES	Goods & Supplies
020	AGRICULTURAL EQUIPMENT, IMPLEMENTS, AND ACCESSORIES (SEE CLASS 022 FOR PARTS)	Goods & Supplies
022	AGRICULTURAL EQUIPMENT AND IMPLEMENT PARTS	Goods & Supplies
025	AIR COMPRESSORS AND ACCESSORIES	Goods & Supplies
031	AIR CONDITIONING, HEATING, AND VENTILATING EQUIPMENT, PARTS AND ACCESSORIES (SEE CLASS 740 ALSO)	Goods & Supplies
035	AIRCRAFT AND AIRPORT EQUIPMENT, PARTS, AND SUPPLIES	Goods & Supplies
037	AMUSEMENT, DECORATIONS, ENTERTAINMENT, GIFTS, TOYS, ETC.	Goods & Supplies
040	ANIMALS, BIRDS, MARINE LIFE, AND POULTRY, LIVE (INCLUDING ACCESSORY ITEMS)	Non-Commercial Activity
045	APPLIANCES AND EQUIPMENT, HOUSEHOLD TYPE	Goods & Supplies
050	ART EQUIPMENT AND SUPPLIES	Goods & Supplies
052	ART OBJECTS	Goods & Supplies
055	AUTOMOTIVE ACCESSORIES FOR AUTOMOBILES, BUSES, TRAILERS, TRUCKS, ETC.	Goods & Supplies
060	AUTOMOTIVE AND TRAILER EQUIPMENT AND PARTS	Goods & Supplies
065	AUTOMOTIVE AND TRAILER BODIES, BODY ACCESSORIES, AND PARTS	Goods & Supplies
070	AUTOMOTIVE VEHICLES AND RELATED TRANSPORTATION EQUIPMENT (INCLUDING TRAILERS) (EFFECTIVE 1-1-06 THIS CLASS INACTIVATED, REFER TO CLASSES 071, 072 AND 073)	Goods & Supplies
071	AUTOMOBILES, SCHOOL BUSES, SUVs, AND VANS (INCLUDING DIESEL, GASOLINE, ELECTRIC, HYBRID, AND ALL OTHER FUEL TYPES)	Goods & Supplies
072	TRUCKS (Incl. Diesel, Gasoline, Electric, Hybrid, and Alternative Fuel Units)	Goods & Supplies
073	TRAILERS	Goods & Supplies
075	AUTOMOTIVE SHOP AND RELATED EQUIPMENT AND SUPPLIES	Goods & Supplies
080	BADGES, AWARDS, EMBLEMS, NAME TAGS AND PLATES, JEWELRY, ETC.	Goods & Supplies
085	BAGS, BAGGING, TIES, AND EROSION SHEETING, ETC.	Goods & Supplies
090	BAKERY EQUIPMENT, COMMERCIAL	Goods & Supplies
095	BARBER AND BEAUTY SHOP EQUIPMENT AND SUPPLIES	Goods & Supplies
100	BARRELS, DRUMS, KEGS, AND CONTAINERS	Goods & Supplies
105	BEARINGS (SEE CLASS 060 FOR WHEEL BEARINGS)	Goods & Supplies
110	BELTS AND BELTING: AUTOMOTIVE AND INDUSTRIAL	Goods & Supplies

115	BIOCHEMICALS, RESEARCH	Goods & Supplies
120	BOATS, MOTORS, AND MARINE EQUIPMENT	Goods & Supplies
125	BOOKBINDING SUPPLIES	Goods & Supplies
135	BRICKS, CLAY, REFRACTORY MATERIALS, STONE, AND TILE PRODUCTS	Goods & Supplies
140	BROOM, BRUSH, AND MOP MANUFACTURING MACHINERY AND SUPPLIES	Goods & Supplies
145	BRUSHES (SEE CLASS 485 FOR JANITORIAL TYPE)	Goods & Supplies
150	BUILDER'S SUPPLIES	Goods & Supplies
155	BUILDINGS AND STRUCTURES: FABRICATED AND PREFABRICATED	Goods & Supplies
160	BUTCHER SHOP AND MEAT PROCESSING EQUIPMENT	Goods & Supplies
165	CAFETERIA AND KITCHEN EQUIPMENT, COMMERCIAL	Goods & Supplies
175	CHEMICAL LABORATORY EQUIPMENT AND SUPPLIES	Goods & Supplies
180	CHEMICAL RAW MATERIALS (IN LARGE QUANTITIES PRIMARILY FOR MANUFACTURING JANITORIAL AND LAUNDRY PRODUCTS)	Goods & Supplies
190	CHEMICALS AND SOLVENTS, COMMERCIAL (IN BULK)	Goods & Supplies
192	CLEANING COMPOSITIONS, DETERGENTS, SOLVENTS, AND STRIPPERS - PREPACKAGED	Goods & Supplies
193	CLINICAL LABORATORY REAGENTS AND TESTS (BLOOD GROUPING, DIAGNOSTIC, DRUG MONITORING, ETC.)	Goods & Supplies
195	CLOCKS, WATCHES, TIMEPIECES, JEWELRY AND PRECIOUS STONES	Goods & Supplies
200	CLOTHING: ATHLETIC, CASUAL, DRESS, UNIFORM, WEATHER AND WORK RELATED	Goods & Supplies
201	CLOTHING ACCESSORIES (SEE CLASS 800 FOR SHOES AND BOOTS)	Goods & Supplies
204	COMPUTER HARDWARE AND PERIPHERALS FOR MICROCOMPUTERS	Goods & Supplies
206	COMPUTER HARDWARE AND PERIPHERALS FOR MINI AND MAIN FRAME COMPUTERS	Goods & Supplies
207	COMPUTER ACCESSORIES AND SUPPLIES	Goods & Supplies
208	COMPUTER SOFTWARE FOR MICROCOMPUTERS (PREPROGRAMMED)	Goods & Supplies
209	COMPUTER SOFTWARE FOR MINI AND MAINFRAME COMPUTERS (PREPROGRAMMED)	Goods & Supplies
210	CONCRETE AND METAL PRODUCTS, CULVERTS, PILINGS, SEPTIC TANKS, ACCESSORIES AND SUPPLIES	Goods & Supplies
220	CONTROLLING, INDICATING, MEASURING, MONITORING, AND RECORDING INSTRUMENTS AND SUPPLIES	Goods & Supplies
225	COOLERS, DRINKING WATER (WATER FOUNTAINS)	Goods & Supplies
232	CRAFTS, GENERAL	Goods & Supplies
233	CRAFTS, SPECIALIZED	Goods & Supplies
240	CUTLERY, COOKWARE, DISHES, GLASSWARE, SILVERWARE, UTENSILS, AND SUPPLIES	Goods & Supplies
245	DAIRY EQUIPMENT AND SUPPLIES	Goods & Supplies
250	DATA PROCESSING CARDS AND PAPER	Goods & Supplies
255	DECALS AND STAMPS	Goods & Supplies

257	DEFENSE SYSTEM AND HOMELAND SECURITY EQUIPMENT, WEAPONS AND ACCESSORIES	Goods & Supplies
260	DENTAL EQUIPMENT AND SUPPLIES	Goods & Supplies
265	DRAPERIES, CURTAINS, AND UPHOLSTERY MATERIAL (INCLUDING AUTOMOBILE UPHOLSTERY)	Goods & Supplies
269	DRUGS AND PHARMACEUTICALS	Goods & Supplies
271	DRUG AND FEEDING ADMINISTRATION, INFUSION, AND IRRIGATION EQUIPMENT AND SUPPLIES	Goods & Supplies
279	EIGHTEENTH (18TH) CENTURY REPRODUCTION GOODS	Goods & Supplies
280	ELECTRICAL CABLES AND WIRES (NOT ELECTRONIC)	Goods & Supplies
285	ELECTRICAL EQUIPMENT AND SUPPLIES (EXCEPT CABLE AND WIRE)	Goods & Supplies
287	ELECTRONIC EQUIPMENT, COMPONENTS, PARTS, AND ACCESSORIES (SEE CLASS 730 FOR TESTING OR ANALYZING TYPE)	Goods & Supplies
290	ENERGY COLLECTING EQUIPMENT AND ACCESSORIES: SOLAR AND WIND	Goods & Supplies
295	ELEVATORS, ESCALATORS, AND MOVING WALKS (BUILDING TYPE)	Goods & Supplies
305	ENGINEERING AND ARCHITECTURAL EQUIPMENT, SURVEYING EQUIPMENT, DRAWING INSTRUMENTS, AND SUPPLIES	Goods & Supplies
310	ENVELOPES, PLAIN (SEE CLASSES 525, 615, 640, 655, 665, AND 966 FOR OTHER TYPES)	Goods & Supplies
312	ENVIRONMENTAL PROTECTIVE EQUIPMENT (INSIDE AND OUTSIDE)	Goods & Supplies
315	EPOXY BASED FORMULATIONS FOR ADHESIVES, COATINGS, AND RELATED AGENTS	Goods & Supplies
318	FARE COLLECTION EQUIPMENT AND SUPPLIES	Goods & Supplies
320	FASTENERS: BOLTS, NUTS, PINS, RIVETS, SCREWS, ETC. (INCL. PACKAGING, STRAPPING AND TYING EQUIPMENT AND SUPPLIES)	Goods & Supplies
325	FEED, BEDDING, VITAMINS AND SUPPLEMENTS FOR ANIMALS (SEE CLASS 875 FOR DRUGS AND PHARMACEUTICALS FOR ANIMALS)	Goods & Supplies
330	FENCING	Goods & Supplies
335	FERTILIZERS AND SOIL CONDITIONERS	Goods & Supplies
340	FIRE PROTECTION EQUIPMENT AND SUPPLIES	Goods & Supplies
345	FIRST AID AND SAFETY EQUIPMENT AND SUPPLIES (EXCEPT NUCLEAR AND WELDING)	Goods & Supplies
350	FLAGS, FLAG POLES, BANNERS, AND ACCESSORIES	Goods & Supplies
360	FLOOR COVERING, FLOOR COVERING INSTALLATION AND REMOVAL EQUIPMENT, AND SUPPLIES	Goods & Supplies
365	FLOOR MAINTENANCE MACHINES, PARTS, AND ACCESSORIES	Goods & Supplies
370	FOOD PROCESSING AND CANNING EQUIPMENT AND SUPPLIES	Goods & Supplies
375	FOODS: BAKERY PRODUCTS (FRESH)	Goods & Supplies
380	FOODS: DAIRY PRODUCTS (FRESH)	Goods & Supplies
385	FOODS, FROZEN	Goods & Supplies
390	FOODS: PERISHABLE	Goods & Supplies
393	FOODS: STAPLE GROCERY AND GROCER'S MISCELLANEOUS ITEMS	Goods & Supplies

395	FORMS, CONTINUOUS: COMPUTER PAPER, FORM LABELS, SNAP-OUT FORMS, AND FOLDERS FOR FORMS	Goods & Supplies
400	FOUNDRY CASTINGS, EQUIPMENT, AND SUPPLIES	Goods & Supplies
405	FUEL, OIL, GREASE AND LUBRICANTS	Goods & Supplies
410	FURNITURE: HEALTH CARE, HOSPITAL AND/OR DOCTOR'S OFFICE	Goods & Supplies
415	FURNITURE: LABORATORY	Goods & Supplies
420	FURNITURE: CAFETERIA, CHAPEL, DORMITORY, HOUSEHOLD, LIBRARY, LOUNGE, SCHOOL	Goods & Supplies
425	FURNITURE: OFFICE	Goods & Supplies
430	GASES, CONTAINERS, EQUIPMENT: LABORATORY, MEDICAL, AND WELDING	Goods & Supplies
435	GERMICIDES, CLEANERS, AND RELATED SANITATION PRODUCTS FOR HEALTH CARE PERSONNEL	Goods & Supplies
440	GLASS AND GLAZING SUPPLIES	Goods & Supplies
445	HAND TOOLS (POWERED AND NON-POWERED), ACCESSORIES AND SUPPLIES	Goods & Supplies
450	HARDWARE AND RELATED ITEMS	Goods & Supplies
460	HOSE, ACCESSORIES, AND SUPPLIES: INDUSTRIAL, COMMERCIAL, AND GARDEN	Goods & Supplies
465	HOSPITAL AND SURGICAL EQUIPMENT, INSTRUMENTS, AND SUPPLIES	Goods & Supplies
470	HOSPITAL, NURSING HOME OR RESIDENTIAL SPECIALIZED EQUIPMENT FOR THE HANDICAPPED AND DISABLED	Goods & Supplies
475	HOSPITAL, SURGICAL, AND MEDICAL RELATED ACCESSORIES AND SUNDRY ITEMS	Goods & Supplies
485	JANITORIAL SUPPLIES, GENERAL LINE	Goods & Supplies
490	LABORATORY EQUIPMENT, ACCESSORIES AND SUPPLIES: GENERAL ANALYTICAL AND RESEARCH FOR NUCLEAR, OPTICAL, AND PHYSICAL	Goods & Supplies
493	LABORATORY EQUIPMENT, ACCESSORIES, AND SUPPLIES: BIOCHEMISTRY, CHEMISTRY, ENVIRONMENTAL SCIENCE, ETC.	Goods & Supplies
495	LABORATORY AND FIELD EQUIPMENT AND SUPPLIES: BIOLOGY, BOTANY, GEOLOGY, MICROBIOLOGY, ZOOLOGY, ETC.	Goods & Supplies
500	LAUNDRY AND DRY-CLEANING EQUIPMENT, ACCESSORIES, AND SUPPLIES, COMMERCIAL	Goods & Supplies
505	LAUNDRY AND DRY-CLEANING COMPOUNDS, DETERGENTS, AND SUPPLIES	Goods & Supplies
510	LAUNDRY TEXTILES AND SUPPLIES	Goods & Supplies
515	LAWN MAINTENANCE EQUIPMENT AND ACCESSORIES (SEE CLASS 020 FOR AGRICULTURAL TYPES)	Goods & Supplies
520	LEATHER AND SHOE ACCESSORIES, EQUIPMENT, AND SUPPLIES	Goods & Supplies
525	LIBRARY AND ARCHIVAL EQUIPMENT, MACHINES, AND SUPPLIES	Goods & Supplies
530	LUGGAGE, BRIEF CASES, PURSES AND RELATED ITEMS	Goods & Supplies
540	LUMBER, SIDING, AND RELATED PRODUCTS	Goods & Supplies
545	MACHINERY AND HARDWARE, INDUSTRIAL	Goods & Supplies

550	MARKERS, PLAQUES AND TRAFFIC CONTROL DEVICES	Goods & Supplies
553	MANUFACTURING COMPONENTS AND SUPPLIES	Goods & Supplies
555	METAL, PAPER, AND PLASTIC STENCILS AND STENCILING DEVICES	Goods & Supplies
556	MASS TRANSPORTATION - TRANSIT BUS	Goods & Supplies
557	MASS TRANSPORTATION - TRANSIT BUS ACCESSORIES AND PARTS	Goods & Supplies
558	MASS TRANSPORTATION - RAIL VEHICLES AND SYSTEMS	Goods & Supplies
559	MASS TRANSPORTATION - RAIL VEHICLE PARTS AND ACCESSORIES	Goods & Supplies
560	MATERIAL HANDLING, CONVEYORS, STORAGE EQUIPMENT AND ACCESSORIES	Goods & Supplies
565	MATTRESS AND PILLOW MANUFACTURING MACHINERY AND SUPPLIES	Goods & Supplies
570	METALS: BARS, PLATES, RODS, SHEETS, STRIPS, STRUCTURAL SHAPES, TUBING, AND FABRICATED ITEMS	Goods & Supplies
575	MICROFICHE AND MICROFILM EQUIPMENT, ACCESSORIES, AND SUPPLIES	Goods & Supplies
578	MISCELLANEOUS PRODUCTS (NOT OTHERWISE CLASSIFIED)	Goods & Supplies
580	MUSICAL INSTRUMENTS, ACCESSORIES, AND SUPPLIES	Goods & Supplies
590	NOTIONS AND RELATED SEWING ACCESSORIES AND SUPPLIES	Goods & Supplies
593	NUCLEAR EQUIPMENT COMPONENTS, ACCESSORIES AND SUPPLIES	Goods & Supplies
595	NURSERY (PLANTS) STOCK, EQUIPMENT, AND SUPPLIES	Goods & Supplies
600	OFFICE MACHINES, EQUIPMENT, AND ACCESSORIES	Goods & Supplies
605	OFFICE MECHANICAL AIDS, SMALL MACHINES, AND APPARATUSES	Goods & Supplies
610	OFFICE SUPPLIES: CARBON PAPER AND RIBBONS, ALL TYPES	Goods & Supplies
615	OFFICE SUPPLIES, GENERAL	Goods & Supplies
620	OFFICE SUPPLIES: ERASERS, INKS, LEADS, PENS, PENCILS, ETC.	Goods & Supplies
625	OPTICAL EQUIPMENT, ACCESSORIES, AND SUPPLIES	Goods & Supplies
630	PAINT, PROTECTIVE COATINGS, VARNISH, WALLPAPER, AND RELATED PRODUCTS	Goods & Supplies
635	PAINTING EQUIPMENT AND ACCESSORIES	Goods & Supplies
640	PAPER AND PLASTIC PRODUCTS, DISPOSABLE	Goods & Supplies
645	PAPER (FOR OFFICE AND PRINT SHOP USE)	Goods & Supplies
650	PARK, PLAYGROUND, RECREATIONAL AREA AND SWIMMING POOL EQUIPMENT AND SUPPLIES	Goods & Supplies
652	PERSONAL HYGIENE AND GROOMING EQUIPMENT AND SUPPLIES	Goods & Supplies
655	PHOTOGRAPHIC EQUIPMENT, FILM, AND SUPPLIES (NOT GRAPHIC ARTS, MICROFILM, AND X-RAY)	Goods & Supplies
658	PIPE, TUBING, AND ACCESSORIES (NOT FITTINGS)	Goods & Supplies
659	PIPE AND TUBING FITTINGS	Goods & Supplies
660	PIPES, TOBACCOS, SMOKING ACCESSORIES; ALCOHOLIC BEVERAGES	Goods & Supplies
665	PLASTICS, RESINS, FIBERGLASS: CONSTRUCTION, FORMING, LAMINATING, AND MOLDING EQUIPMENT, ACCESSORIES, AND SUPPLIES	Goods & Supplies
670	PLUMBING EQUIPMENT, FIXTURES, AND SUPPLIES	Goods & Supplies

675	POISONS: AGRICULTURAL AND INDUSTRIAL	Goods & Supplies
680	POLICE AND PRISON EQUIPMENT AND SUPPLIES	Goods & Supplies
685	POULTRY EQUIPMENT AND SUPPLIES	Goods & Supplies
690	POWER GENERATION EQUIPMENT, ACCESSORIES, AND SUPPLIES	Goods & Supplies
691	POWER TRANSMISSION EQUIPMENT (ELECTRICAL, MECHANICAL, AIR AND HYDRAULIC)	Goods & Supplies
700	PRINTING PLANT EQUIPMENT AND SUPPLIES (EXCEPT PAPER)	Goods & Supplies
710	PROSTHETIC DEVICES, HEARING AIDS, AUDITORY TESTING EQUIPMENT, ELECTRONIC READING DEVICES, ETC.	Goods & Supplies
715	PUBLICATIONS, AUDIOVISUAL MATERIALS, BOOKS, TEXTBOOKS (PREPARED MATERIALS ONLY)	Goods & Supplies
720	PUMPING EQUIPMENT AND ACCESSORIES	Goods & Supplies
725	RADIO COMMUNICATION, TELEPHONE, AND TELECOMMUNICATION EQUIPMENT, ACCESSORIES, AND SUPPLIES (SEE CLASS 840 FOR TELEVISION EQUIPMENT) (EFFECTIVE 3-1-07 THIS CLASS INACTIVATED FOR NEW USE. REFER TO CLASSES, 726, 838 AND 839)	Goods & Supplies
726	RADIO COMMUNICATION EQUIPMENT, ACCESSORIES AND SUPPLIES	Goods & Supplies
730	RADIO COMMUNICATION AND TELECOMMUNICATION TESTING, MEASURING, AND ANALYZING EQUIPMENT, ACCESSORIES AND SUPPLIES	Goods & Supplies
735	RAGS, SHOP TOWELS, AND WIPING CLOTHS	Goods & Supplies
740	REFRIGERATION EQUIPMENT AND ACCESSORIES	Goods & Supplies
745	ROAD AND HIGHWAY BUILDING MATERIALS (ASPHALTIC)	Goods & Supplies
750	ROAD AND HIGHWAY BUILDING MATERIALS (NOT ASPHALTIC)	Goods & Supplies
755	ROAD AND HIGHWAY ASPHALT AND CONCRETE HANDLING AND PROCESSING EQUIPMENT	Goods & Supplies
760	ROAD AND HIGHWAY EQUIPMENT: EARTH HANDLING, GRADING, MOVING, PACKING, ETC.	Goods & Supplies
765	ROAD AND HIGHWAY EQUIPMENT (EXCEPT EQUIPMENT IN CLASSES 755 AND 760)	Goods & Supplies
770	ROOFING MATERIALS AND SUPPLIES	Goods & Supplies
775	SALT (SODIUM CHLORIDE) (SEE CLASS 393 FOR TABLE SALT)	Goods & Supplies
780	SCALES AND WEIGHING APPARATUS (SEE 175-08 FOR LABORATORY BALANCES)	Goods & Supplies
785	SCHOOL EQUIPMENT, TEACHING AIDS, AND SUPPLIES	Goods & Supplies
790	SEED, SOD, SOIL, AND INOCULANTS	Goods & Supplies
795	SEWING AND TEXTILE MACHINERY AND ACCESSORIES	Goods & Supplies
800	SHOES AND BOOTS	Goods & Supplies
801	SIGNS, SIGN MATERIALS, SIGN MAKING EQUIPMENT, AND RELATED SUPPLIES	Goods & Supplies
803	SOUND SYSTEMS, COMPONENTS, AND ACCESSORIES: GROUP INTERCOM, MUSIC, PUBLIC ADDRESS, ETC.	Goods & Supplies
804	SPACECRAFTS, ACCESSORIES AND COMPONENTS	Goods & Supplies

805	SPORTING GOODS, ATHLETIC EQUIPMENT AND ATHLETIC FACILITY EQUIPMENT	Goods & Supplies
810	SPRAYING EQUIPMENT (EXCEPT HOUSEHOLD, NURSERY PLANT, AND PAINT)	Goods & Supplies
815	STEAM AND HOT WATER FITTINGS, ACCESSORIES, AND SUPPLIES	Goods & Supplies
820	STEAM AND HOT WATER BOILERS AND STEAM HEATING EQUIPMENT	Goods & Supplies
825	STOCKMAN EQUIPMENT AND SUPPLIES	Goods & Supplies
830	TANKS (METAL, PLASTIC, WOOD, AND SYNTHETIC MATERIALS): MOBILE, PORTABLE, STATIONARY, AND UNDERGROUND TYPES	Goods & Supplies
832	TAPE (NOT DATA PROCESSING, MEASURING, OPTICAL, SEWING, SOUND, OR VIDEO)	Goods & Supplies
838	TELECOMMUNICATION EQUIPMENT, ACCESSORIES AND SUPPLIES	Goods & Supplies
839	TELEPHONE EQUIPMENT, ACCESSORIES AND SUPPLIES	Goods & Supplies
840	TELEVISION EQUIPMENT AND ACCESSORIES	Goods & Supplies
845	TESTING APPARATUS AND INSTRUMENTS (NOT FOR ELECTRICAL OR ELECTRONIC MEASUREMENTS)	Goods & Supplies
850	TEXTILES, FIBERS, HOUSEHOLD LINENS, AND PIECE GOODS	Goods & Supplies
855	THEATRICAL EQUIPMENT AND SUPPLIES	Goods & Supplies
860	TICKETS, COUPON BOOKS, SALES BOOKS, STRIP BOOKS, ETC.	Goods & Supplies
863	TIRES AND TUBES (INCL. RECAPPED/RETREADED TIRES)	Goods & Supplies
864	TRAIN CONTROLS, ELECTRONIC	Goods & Supplies
865	TWINE AND STRING	Goods & Supplies
870	VENETIAN BLINDS, AWNINGS, AND SHADES	Goods & Supplies
875	VETERINARY EQUIPMENT AND SUPPLIES (SEE CLASS 325 FOR VITAMINS AND SUPPLEMENTS FOR ANIMALS)	Goods & Supplies
880	VISUAL EDUCATION EQUIPMENT AND SUPPLIES (EXCEPT PROJECTION LAMPS -SEE CLASS 285)	Goods & Supplies
883	VOICE RESPONSE SYSTEMS	Goods & Supplies
885	WATER AND WASTEWATER TREATING CHEMICALS	Goods & Supplies
890	WATER SUPPLY, GROUNDWATER, SEWAGE TREATMENT, AND RELATED EQUIPMENT (NOT FOR AIR CONDITIONING, STEAM BOILER, OR LABORATORY REAGENT WATER)	Goods & Supplies
891		Goods & Supplies
895	WELDING EQUIPMENT AND SUPPLIES	Goods & Supplies
898	X-RAY AND OTHER RADIOLOGICAL EQUIPMENT AND SUPPLIES (MEDICAL)	Goods & Supplies
905	AIRCRAFT AND AIRPORT OPERATIONS SERVICES	Non-Professional Services
906	ARCHITECTURAL SERVICES, PROFESSIONAL	Architecture & Engineering
907	ARCHITECTURAL AND ENGINEERING SERVICES, NON-PROFESSIONAL	Non-Professional Services
908	BOOKBINDING AND REPAIRING SERVICES	Non-Professional Services
909	BUILDING CONSTRUCTION SERVICES, NEW (INCL. MAINTENANCE AND REPAIR SERVICES)	Construction

910	BUILDING MAINTENANCE, INSTALLATION AND REPAIR SERVICES	Non-Professional Services
911	CONSTRUCTION AND UTILITIES, HIGHER EDUCATION	Construction
912	CONSTRUCTION SERVICES, GENERAL (INCL. MAINTENANCE AND REPAIR SERVICES)	Construction
913	CONSTRUCTION SERVICES, HEAVY (INCL. MAINTENANCE AND REPAIR SERVICES)	Construction
914	CONSTRUCTION SERVICES, TRADE (NEW CONSTRUCTION)	Construction
915	COMMUNICATIONS AND MEDIA RELATED SERVICES	Non-Professional Services
918	CONSULTING SERVICES	Professional Services
920	DATA PROCESSING, COMPUTER, PROGRAMMING, AND SOFTWARE SERVICES	Non-Professional Services
924	EDUCATIONAL/TRAINING SERVICES	Professional Services
925	ENGINEERING SERVICES, PROFESSIONAL	Architecture & Engineering
926	ENVIRONMENTAL AND ECOLOGICAL SERVICES	Professional Services
928	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR AUTOMOBILES, TRUCKS, TRAILERS, TRANSIT BUSES AND OTHER VEHICLES	Non-Professional Services
929	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR AGRICULTURAL, CONSTRUCTION, HEAVY INDUSTRIAL, MATERIAL HANDLING, AND ROAD AND HIGHWAY EQUIPMENT	Non-Professional Services
931	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR APPLIANCE, ATHLETIC, CAFETERIA, FURNITURE, MUSICAL INSTRUMENTS, AND SEWING EQUIPMENT	Non-Professional Services
934	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR LAUNDRY, LAWN, PAINTING, PLUMBING, AND SPRAYING EQUIPMENT	Non-Professional Services
936	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR GENERAL EQUIPMENT	Non-Professional Services
938	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR HOSPITAL, LABORATORY, AND TESTING EQUIPMENT	Non-Professional Services
939	EQUIPMENT MAINTENANCE AND REPAIR SERVICES FOR COMPUTERS, OFFICE, PHOTOGRAPHIC, AND RADIO/TELEVISION EQUIPMENT	Non-Professional Services
940	EQUIPMENT MAINTENANCE, REPAIR, CONSTRUCTION, AND RELATED SERVICES FOR RAILROADS	Non-Professional Services
941	EQUIPMENT MAINT, REPAIR, AND RELATED SERVICES FOR POWER GENERATION AND TRANSMISSION EQUIP.	Non-Professional Services
944	FARMING AND RANCHING SERVICES, ANIMAL AND CROP	Non-Professional Services
945	FISHING, HUNTING, TRAPPING, GAME PROPAGATION, AND RELATED SERVICES	Non-Professional Services
946	FINANCIAL SERVICES	Professional Services
947	FORESTRY SERVICES	Non-Professional Services
948	HEALTH RELATED SERVICES (FOR HUMAN SERVICES SEE CLASS 952)	Professional Services
952	HUMAN SERVICES	Non-Professional Services
953	INSURANCE AND INSURANCE SERVICES (ALL TYPES)	Professional Services
954	LAUNDRY AND DRY-CLEANING SERVICES	Non-Professional Services

956	LIBRARY SERVICES (INCL. RESEARCH AND SUBSCRIPTION SERVICES)	Non-Professional Services
958	MANAGEMENT SERVICES	Professional Services
959	MARINE CONSTRUCTION AND RELATED SERVICES; MARINE EQUIPMENT MAINTENANCE AND REPAIR	Non-Professional Services
961	MISCELLANEOUS SERVICES, NO. 1 (NOT OTHERWISE CLASSIFIED)	Requires Manual Assignment
962	MISCELLANEOUS SERVICES, NO. 2 (NOT OTHERWISE CLASSIFIED)	Requires Manual Assignment
963	NON-BIDDABLE MISCELLANEOUS ITEMS	Non-Commercial Transactions
965	PRINTING PREPARATIONS: ETCHING, PHOTOENGRAVING, AND PREPARATION OF MATS, NEGATIVES AND PLATES	Non-Professional Services
966	PRINTING AND TYPESETTING SERVICES	Non-Professional Services
967	PRODUCTION AND MANUFACTURING SERVICES	Non-Professional Services
968	PUBLIC WORKS AND RELATED SERVICES	Non-Professional Services
971	REAL PROPERTY RENTAL OR LEASE	Non-Commercial Transactions
975	RENTAL OR LEASE SERVICES OF AGRICULTURAL, AIRCRAFT, AIRPORT, AUTOMOTIVE, MARINE, AND HEAVY EQUIPMENT	Non-Commercial Transactions
977	RENTAL OR LEASE SERVICES OF APPLIANCES, CAFETERIA, FILM, FURNITURE, HARDWARE, MUSICAL, SEWING, AND WINDOW AND FLOOR COVERINGS	Non-Commercial Transactions
979	RENTAL OR LEASE SERVICES OF ENGINEERING, HOSPITAL, LABORATORY, PRECISION INSTRUMENTS, REFRIGERATION, SCALES, AND TESTING EQUIPMENT	Non-Commercial Transactions
981	RENTAL OR LEASE OF GENERAL EQUIPMENT (HVAC, ATHLETIC, FIRE AND POLICE PROTECTION, ETC.)	Non-Commercial Transactions
983	RENTAL OR LEASE SERVICES OF CLOTHING, JANITORIAL, LAUNDRY, LAWN, PAINTING, SPRAYING, LABORATORY AND TEXTILE EQUIPMENT	Non-Commercial Transactions
984	RENTAL OR LEASE SERVICES OF COMPUTERS, DATA PROCESSING, AND WORD PROCESSING EQUIPMENT	Non-Commercial Transactions
985	RENTAL OR LEASE SERVICES OF OFFICE, PHOTOGRAPHIC, PRINTING, RADIO/TELEVISION/TELEPHONE EQUIPMENT	Non-Commercial Transactions
988	ROADSIDE, GROUNDS, RECREATIONAL AND PARK AREA SERVICES	Non-Professional Services
989	SAMPLING AND SAMPLE PREPARATION SERVICES (FOR TESTING)	Professional Services
990	SECURITY, FIRE, SAFETY, AND EMERGENCY SERVICES (INCLUDING DISASTER DOCUMENT RECOVERY)	Non-Professional Services
992	TESTING AND CALIBRATION SERVICES	Non-Professional Services
998	SALE OF SURPLUS AND OBSOLETE ITEMS	Non-Commercial Transactions