

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Joint Availability and Disparity Study

2

VOLUME

CITY OF
ARLINGTON

FINAL REPORT | JUNE 2010

Submitted by: Mason Tillman Associates, Ltd.



ACKNOWLEDGMENT

In 2008, North Central Texas Council of Governments (NCTCOG) commissioned an Availability and Disparity Study (Study) on behalf of six agencies that formed a Consortium. The six Consortium Agencies that participated in the Study are the City of Arlington, the City of Fort Worth, Dallas / Fort Worth International Airport Board, Fort Worth Independent School District, Fort Worth Transportation Authority, and the North Texas Tollway Authority. Mason Tillman Associates, Ltd., of Oakland, California was selected by NCTCOG to perform the Study.

The purpose of the Availability and Disparity Study was to evaluate the procurement and contracting practices of each agency, particularly their use of minority, woman-owned, and disadvantaged businesses and how well each Consortium Agency's current program promotes equal opportunity for bidding, diversification of its vendor base, and equitable distribution of purchases. The City of Arlington Availability and Disparity Study focused on four industries - construction, architecture and engineering, professional services, and non-professional services. It reviewed the award of prime contracts during the study period of October 1, 2002 to September 30, 2007.

The Burrell Group, Adrian Information Systems, Consumer and Market Insights, Trovada Davis Agency, Ms. Sherry Crum Tupper, and Scott Emblidge, Esq. assisted Mason Tillman in the performance of the Study. The subcontractor team performed legal analysis, data collection activities, anecdotal interviews, design services, and outreach to the business community.

The Study could not have been conducted without the cooperation of the local chambers of commerce and business organizations, and the many Tarrant County and Dallas County business owners who demonstrated their commitment to the Study by participating in interviews and focus groups. In addition, the City of Arlington's staff played a critical role in assisting with the data collection by making available City of Arlington personnel, contract records, and documents needed to perform the Study. The extraordinary effort of the City of Arlington and the business community should be applauded.

Monte Mercer, Deputy Executive Director and Donna Steward, Procurement and Facilities Coordinator of NCTCOG provided overall leadership and guidance for the Consortium's Availability and Disparity Study. Fiona Allen, Deputy City Manager and Debra Carrejo, Purchasing Manager of the City of Arlington facilitated Mason Tillman's effort to secure the needed resources to complete the City of Arlington's Availability and Disparity Study.

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CONTRACTING AND PROCUREMENT ANALYSIS

I. INTRODUCTION

Mason Tillman was commissioned by the North Central Texas Council of Governments to conduct an Availability and Disparity Study for the City of Arlington, the City of Fort Worth, Dallas / Fort Worth International Airport Board, Fort Worth Independent School District, Fort Worth Transportation Authority, and the North Texas Tollway Authority. This chapter reviews the contracting and procurement policies of the City of Arlington (City) in the areas of goods and services, construction services, and professional services during the October 1, 2002 to September 30, 2007 study period.

A. Governing Laws and Regulations

The laws and regulations that govern City of Arlington's procurement procedures conform to standards established by federal and State law as well as City rules and policies which include:

- State Law
 - i. *Texas Local Government Code*, Chapters 252; 271
 - ii. *Texas Government Code*, Chapters 791; 2253; 2254
- City of Arlington Policy
 - i. City of Arlington Charter and Ordinances
 - ii. City of Arlington Procurement Policy (Revised November 2000)
 - iii. City of Arlington Purchasing Manual (Revised March 2004)



II. DEFINITIONS

Goods and services procured by the City are classified within the following three industries:

Goods and Services in which goods are defined as supplies, materials, commodities, and equipment and services are defined as skilled or unskilled labor, not including professional services covered by the Professional Services Procurement Act.¹

Construction Services are defined as new construction, remodeling, renovation, maintenance, and repair. For purposes of this report, this industry will be defined as Construction.

Professional Services as defined by The Professional Services Procurement Act² are those services within the scope of the practice as defined by State law. The Act defines professional services by license and registration. The relevant licenses and registrations are accounting, architecture, landscape architecture, land surveying, professional engineering, real estate appraising, or other relevant services.

III. OVERVIEW OF THE PROCUREMENT PROCESS

The City has adopted procurement procedures, as set forth in the City's Procurement Manual, with the intention to provide guidance and instruction for the purchasing process as well as to conduct its purchasing and procurement functions efficiently and effectively. The procurement of goods and services, construction services, and professional services are subject to different advertisement, solicitation, and approval standards.

Informal solicitations are purchases valued at \$25,000 or less for goods and services, construction services, and professional services, including design and engineering. Informal solicitations are not subject to advertising requirements and may have limited solicitation requirements.

Formal solicitations are purchases valued more than \$25,000 and must be advertised and procured through a competitive process. The competitive procurement methods used are requests for competitive sealed bids, competitive sealed proposals, qualifications, and offers.



¹ The Professional Services Procurement Act (September 1, 1993), *Texas Government Code*, Chapter 2254

² *Ibid*

Purchases exempt from the City's procurement process are emergency purchases, sole source purchases, and cooperative purchases. Cooperative agreements include interlocal agreements and purchases from state contracts.

Table 1.01 summarizes the procurement requirements by industry, described in Section IV.



Table 1.01 City of Arlington Procurement Process

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Goods and Services	Valued less than \$100	None	Procurement card or petty cash is used	Requesting Department
	Valued at \$100 through \$3,000	None	One telephone or written quote or procurement card	Requesting Department
	Valued at \$3,001 through \$25,000	None	Three written quotes including two from Tarrant County HUBs, if available	Purchasing Agent
	Valued more than \$25,000	Advertisements in the <i>Star-Telegram</i> newspaper once a week for two consecutive weeks before bid opening date Posting on the City website concurrent with newspaper advertising	Request for Competitive Sealed Bids or Request for Competitive Sealed Proposals	City Council

Table 1.01 City of Arlington Procurement Process

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Construction Services	Valued at less than \$3,000	None	One telephone or written quote	Requesting Department
	Valued at \$3,000 through \$25,000	None	Three written quotes including two from Tarrant County HUBs, if available	Public Works Administrator
	Valued more than \$25,000	Advertisements in the <i>Star-Telegram</i> newspaper once a week for two consecutive weeks before bid opening date Posting on the City website concurrent with newspaper advertising	Request for Competitive Sealed Bids	City Council

Table 1.01 City of Arlington Procurement Process

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Professional Services	Valued at less than \$3,000	None	Request for Qualifications	Requesting Department
	Valued at \$3,000 through \$25,000	None	Request for Qualifications and, if available, two Tarrant County HUBs should be contacted	Public Works Administrator
	Valued more than \$25,000	Advertisements in the <i>Star-Telegram</i> newspaper once a week for two consecutive weeks before bid opening date Posting on the City website concurrent with newspaper advertising	Request for Qualifications	City Council

Table 1.01 City of Arlington Procurement Process

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Emergency Purchases	Valued at \$25,000 or less	None	None	Purchasing Agent or Public Works Administrator Approval may be retroactive, if necessary
	Valued more than \$25,000	None	None	City Council Approval may be retroactive, if necessary
Sole Source Purchases	Valued at \$25,000 or less	None	None	Purchasing Agent or Public Works Administrator
	Valued more than \$25,000	None	None	City Council

IV. STANDARDS FOR PROCURING CITY OF ARLINGTON CONTRACTS

A. Informal Solicitations

Informal solicitations are designed to promote efficiency and economy in contracting as well as to avoid unnecessary burdens for the City and its contractors. The informal solicitation method is also considered a standard to reduce administrative costs and improve opportunities for historically underutilized businesses' to obtain a fair proportion of City contracts. No advertisement is required to solicit quotations for informal purchases.

1. Purchases of Goods and Services Valued Less than \$100

Purchases of goods and services valued at less than \$100 are procured without solicitation requirements. The City of Arlington procurement card or petty cash must be used to secure goods and services valued less than \$100. The user department has approval authority for these purchases.

2. Purchases of Goods and Services Valued at \$100 through \$3,000

Purchases of goods and services valued at \$100 through \$3,000 are to be procured with one telephone or written quote. Use of the procurement card is suggested. The user department has approval authority for these purchases.

3. Purchases of Goods and Services Valued at \$3,001 through \$25,000

Purchases of goods and services valued at \$3,001 through \$25,000 are to be procured with a minimum of three written quotes, two of which should be from Tarrant County HUBS, if available. The Purchasing Division has approval authority for these purchases.

4. Purchases of Construction Services Valued Less than \$3,000

Purchases of construction services valued at less than \$3,000 are to be procured with one telephone or written quote. The user department has approval authority for these purchases.

5. Purchases of Construction Services Valued at \$3,000 through \$25,000

Purchases of construction services valued at \$3,000 through \$25,000 are to be procured with a minimum of three written quotes, two of which should be from Tarrant County HUBS, if available. Public Works has approval authority for these purchases.



6. Purchases of Professional Services, including Design and Engineering, Valued Less than \$3,000

Purchases of Professional Services, including Design and Engineering, valued at less than \$3,000 are to be procured with a Request for Qualifications. The user department has approval authority for these purchases.

7. Purchases of Professional Services, including Design and Engineering, Valued at \$3,000 through \$25,000

Purchases of Professional Services, including Design and Engineering, valued at \$3,000 through \$25,000, are to be procured with Request for Qualifications. Two Tarrant County HUBs must be contacted, if available. Public Works has approval authority for these purchases.

B. Formal Solicitations

Contracts valued more than \$25,000 for goods and services, construction services, and professional services are considered formal solicitations. Formal solicitations are required to be advertised in the *Star-Telegram* newspaper once a week for two consecutive weeks before bid opening. In addition, notification of these contracts are to be posted on the City's website concurrent with newspaper advertising. All formal contracts must be approved by the City Council.

Formal contracts for goods and services and construction services must be processed as competitive solicitations using either a request for competitive sealed bids or a request for competitive sealed proposals. The Texas Local Government Code³ defines the requirements for competitive solicitation. Professional Services covered by the Professional Services Procurement Act⁴ are exempt from competitive solicitations.

On October 9, 2007, the City Council by passing Resolution 07-629 set the Council approval threshold for consulting services at \$25,000 and increased the Council approval threshold for all other expenditures to \$50,000. Previously, the City Council had mandated approval for all contracts greater than \$25,000. As this Study analyzes the City's procurement for fiscal years 2003 through 2007, this chapter reflects the previous \$25,000 threshold for formal solicitations.

³ *Texas Local Government Code*, Subchapter B, Section 252.021

⁴ The Professional Services Procurement Act (September 1, 1993), *Texas Government Code*, Chapter 2254



1. Purchases of Goods and Services Valued More than \$25,000

Purchases of goods and services valued more than \$25,000 are to be procured by a request for competitive sealed bids.

Purchases of high technology goods and services and insurance valued more than \$25,000 are to be procured by a Request for Competitive Sealed Proposals. Texas Local Government Code⁵ defines high technology procurement as “the procurement of equipment, goods, or services of a highly technical nature.” Examples of high technology purchases listed therein include information processing equipment, telecommunications equipment, radio and microwave systems, electronic distributed systems, as well as technical services related to such equipment and goods.

2. Purchases of Construction Valued More than \$25,000

Purchases of construction services valued more than \$25,000 are to be procured by a Request for Competitive Sealed Bids.

3. Purchases of Professional Services, including Design and Engineering, Valued More than \$25,000

Purchases of professional services, including Design and Engineering valued more than \$25,000, are to be procured by a Request for Qualifications.

V. EXEMPTIONS FROM CITY OF ARLINGTON'S PROCUREMENT PROCESS

Certain procurements are exempt from City of Arlington's competitive procurement process. Even though these procurements are exempt from the advertising and the formal solicitation process, the exemption categories valued more than \$25,000 require procurement approval from the City Council. The four exemptions are described below.

A. Emergency Purchases

Emergency purchases, as defined by the Local Government Code⁶, are procurements that are: (1) made because of a public calamity that requires the immediate appropriation of money to relieve the necessity of the municipality's residents or to preserve the property of the municipality; (2) necessary to preserve or protect the public health or safety of the

⁵ *Texas Local Government Code*, Section 252.001(4)

⁶ *Texas Local Government Code*, Section 252.022



municipality's residents; and (3) necessary because of unforeseen damage to public machinery, equipment, or other property.

Valid emergencies include those which occur as a result of the breakdown of equipment which must be kept in operation to maintain the public's safety or health, or whose breakdown would result in the disruption of city operations.

Due to the nature of emergencies, approval of emergency purchases may occur after the purchase has taken place. In circumstances where the purchase cannot be approved prior to the award, the requesting department should maintain all applicable documentation and proceed in placing the order with the vendor.

B. Sole Source Purchases

Sole source purchases, as defined by Local Government Code⁷, are items that are available from only one source because of patents, copyrights, secret processes, or natural monopolies; films, manuscripts, or books; gas, water, and other utility services; and captive replacement parts or components for equipment. When a department has identified a specific item with unique features or characteristics essential and necessary to the requesting department and no alternative products are available, a detailed written justification must be provided to the Purchasing Division in advance for review and approval.

C. Cooperative Purchases

Cooperative purchasing occurs when two or more governmental entities coordinate some or all purchasing efforts to reduce administrative costs, take advantage of quantity discounts, share specifications, and create a heightened awareness of legal requirements. Cooperative purchasing can occur through interlocal agreements, state contracts, piggybacking, and joint purchases.

VI. HISTORICALLY UNDERUTILIZED BUSINESS PROGRAM

The City of Arlington encourages the participation of Historically Underutilized Businesses (HUBs) in the City's procurement process. Contractors bidding on City projects must agree to use reasonable and best efforts to select and employ qualified HUB subcontractors. The City of Arlington recognizes the HUB certification of the State of Texas Building and Procurement Commission (TBPC) and the North Texas Regional Certification Agency (NCTRCA).

⁷ *Ibid*





2

PRIME CONTRACTOR UTILIZATION ANALYSIS

I. INTRODUCTION

The first step in a disparity study is the analysis of expenditures to document contracting history in the jurisdiction under review. The objective of the prime utilization analysis is to determine the level of minority and woman-owned business enterprise (M/WBE) utilization as prime contractors.

This chapter documents the City of Arlington's (City) utilization of minority-owned prime contractors (by ethnic group) and women-owned prime contractors from October 1, 2002 to September 30, 2007. The analysis of the City's expenditures during the study period was classified into four industries. The industries are construction, architecture and engineering, professional services, and non-professional services.¹ Construction included public work for new construction, remodeling, renovation, maintenance, demolition and repair of any public structure or building, and other public improvements. Architecture and engineering included construction management, landscape architecture, surveying, mapping services, and architecture and engineering. Professional services included construction management services, and services provided by attorneys, accountants, medical professionals, technical services, research planning, and consultants. Non-professional services included maintenance and other services which could be performed without a professional license, special education, or training.

The data in the Study is disaggregated into nine ethnic and gender groups. The nine groups are listed below in Table 2.01.



¹ The Study did not analyze the procurement of goods contracts.

Table 2.01 Business Ethnic and Gender Groups

Ethnic and Gender Category	Definition
African American Businesses	Businesses owned by male and female African Americans
Asian American Businesses	Businesses owned by male and female Asian-Pacific and Subcontinent Asian Americans
Hispanic American Businesses	Businesses owned by male and female Hispanic Americans
Native American Businesses	Businesses owned by male and female Native Americans
Caucasian Female Business Enterprises	Businesses owned by Caucasian females
Minority Business Enterprises	Businesses owned by African American, Asian American, Hispanic American, and Native American males and females
Women Business Enterprises	Businesses owned by Caucasian females
Minority and Women Business Enterprises	Businesses owned by Minority males, Minority females, and Caucasian females
Caucasian Male Business Enterprises	Businesses owned by Caucasian males and businesses that did not declare their ethnicity or could not be identified as minority or female-owned

II. PRIME CONTRACT DATA SOURCES

The dataset analyzed for prime contractor utilization consists of payments and awards from contracts, purchase orders, and direct payments issued by the City during the study period. For contracts and purchase orders, the records were grouped by either a contract or a PO number. The direct payments, which did not have a unique number, were assigned a unique number and each were presumed to be unique transactions and so coded. In this study, all unique transactions are referred to as contracts.

The contract records were extracted from the two financial systems the City used during the study period. Contracts awarded before 2006 were extracted from a mainframe Application



System. Those contracts awarded after 2006 were extracted from the Lawson procurement database. Paper documents had to be reviewed to complete the compilation of the contract records. Mason Tillman, in collaboration with the City, verified and cleaned the data to remove duplicates; cross-referenced related contracts, purchase orders, and payments; and identified and completed missing or incomplete data.

Each contract was classified into one of the four industries: construction, architecture and engineering, professional services, and non-professional services. Contracts with non-profits, government agencies, and utilities, were marked for exclusion. The industry classifications were reviewed and approved by the City.

When the industry classifications were approved, the ethnicity and gender were verified. The ethnicity and gender information for prime contractors was incomplete, and some records had to be reconstructed, a common problem with government records. Since ethnicity and gender information is central to the validity of the prime contractor utilization analysis, Mason Tillman conducted research to verify the ethnicity and gender for each contract. Prime contractor names were cross-referenced with certification lists, chambers of commerce and trade organization membership directories. Websites were reviewed for ethnicity and gender of the owner(s). Prime contractors whose ethnicity and gender could not be verified through published sources were surveyed.

Once the contract records were cleaned and the ethnicity and gender verified, the utilization analysis was performed.



III. PRIME CONTRACTOR UTILIZATION THRESHOLDS

Contracts within each of the four industries were analyzed at three dollar value categories. One category included all contracts regardless of dollar value. A second category included all contracts under \$500,000. This was the level where there was a demonstrated capacity within the pool of willing M/WBEs to perform the City’s contracts. The third category included the informal contracts which did not require advertising. As seen in Table 2.02, the informal contract threshold was \$25,000 and under for all four industries.

Table 2.02 Informal Contract Thresholds for the City

Industry	Informal Contract Threshold
Construction	\$25,000
Architecture and Engineering	\$25,000
Professional Services	\$25,000
Non-Professional Services	\$25,000



IV. PRIME CONTRACTOR UTILIZATION

A. All Prime Contractors

As depicted in Table 2.03 below, the City issued 3,898 contracts, purchase orders, and direct payments during the October 1, 2002 to September 30, 2007 study period. These transactions are referred to as contract in this study. The 3,898 contracts included 614 for construction, 152 for architecture and engineering, 139 for professional services, and 2,993 for non-professional services.

The payments made by the City during the study period totaled \$225,039,584 for all 3,898 contracts. These expenditures included \$132,789,337 for construction, \$28,033,034 for architecture and engineering, \$9,239,218 for professional services, and \$54,977,995 for non-professional services.

Table 2.03 Total Prime Contracts and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Contracts	Total Dollars Expended
Construction	614	\$132,789,337
Architecture and Engineering	152	\$28,033,034
Professional Services	139	\$9,239,218
Non-Professional Services	2,993	\$54,977,995
Total Expenditures	3,898	\$225,039,584



B. Highly Used Prime Contractors

As depicted in Table 2.04 below, the 3,898 City prime contracts were received by 847 vendors.

Table 2.04 Total Prime Contracts, Utilized Vendors, and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Total Contracts	3,898
Total Utilized Vendors	846
Total Expenditures	\$225,039,584

Twenty four of the 846 vendors received 60 percent of the 3,898 prime contracts. Seven vendors representing 0.83 percent of all vendors utilized during the study period, received \$57,692,036 or 25 percent of the contract dollars. Table 2.05 below, depicts the distribution of the total prime contracts by number of vendors

Table 2.05 Distribution of All Contract Awards by Number of Vendors

Vendors	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
6 Vendors Received	\$57,692,036	25%	31	0.80%
17 Vendors Received	\$114,949,412	50%	193	4.95%
24 Vendors Received	\$135,857,122	60%	208	5.34%
822 Vendors Received	\$89,182,462	40%	3,690	94.66%
846 Vendors Received	\$225,039,584	100%	3,898	100%

Table 2.06 below presents the ethnic and gender profile of the 17 most highly used prime contractors. The highly used prime contractors were either Hispanic American, Caucasian female, or Caucasian male businesses. The individual contracts received by these 17 businesses ranged from \$295 to \$8,684,380.



Table 2.06 Top Seventeen Highly Used Prime Contractors by Ethnicity and Gender

Ethnicity/Gender	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
African Americans	\$0	0%	0	0%
Asian Americans	\$0	0%	0	0%
Hispanic Americans	\$0	0%	0	0%
Native Americans	\$0	0%	0	0%
Caucasian Females	\$5,122,159	4.46%	4	2.07%
Caucasian Males	\$109,827,253	95.54%	189	97.93%
Total	\$114,949,412	100%	193	100%



C. All Prime Contracts, by Industry

1. Construction Prime Contractor Utilization: All Contracts

Table 2.07 summarizes all prime contract dollars expended by the City on construction contracts. Minority Business Enterprises received 0.94 percent of the construction prime contract dollars; Women Business Enterprises received 7.58 percent; and Caucasian Male Business Enterprises received 91.48 percent.

African Americans received 5 or 0.81 percent of the construction contracts during the study period, representing \$104,370 or 0.08 percent of the contract dollars.

Asian Americans received 2 or 0.33 percent of the construction contracts during the study period, representing \$81,606 or 0.06 percent of the contract dollars.

Hispanic Americans received 21 or 3.42 percent of the construction contracts during the study period, representing \$1,020,301 or 0.77 percent of the contract dollars.

Native Americans received 2 or 0.33 percent of the construction contracts during the study period, representing \$39,616 or 0.03 percent of the contract dollars.

Minority Business Enterprises received 30 or 4.89 percent of the construction contracts during the study period, representing \$1,245,893 or 0.94 percent of the contract dollars.

Women Business Enterprises received 69 or 11.24 percent of the construction contracts during the study period, representing \$10,070,769 or 7.58 percent of the contract dollars.

Minority and Women Business Enterprises received 99 or 16.12 percent of the construction contracts during the study period, representing \$11,316,662 or 8.52 percent of the contract dollars.

Caucasian Male Business Enterprises received 515 or 83.88 percent of the construction contracts during the study period, representing \$121,472,676 or 91.48 percent of the contract dollars.



**Table 2.07 Construction Prime Contractor Utilization: All
Contracts, October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	5	0.81%	\$104,370	0.08%
Asian Americans	2	0.33%	\$81,606	0.06%
Hispanic Americans	21	3.42%	\$1,020,301	0.77%
Native Americans	2	0.33%	\$39,616	0.03%
Caucasian Females	69	11.24%	\$10,070,769	7.58%
Caucasian Males	515	83.88%	\$121,472,676	91.48%
TOTAL	614	100.00%	\$132,789,337	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.16%	\$15,415	0.01%
African American Males	4	0.65%	\$88,955	0.07%
Asian American Females	2	0.33%	\$81,606	0.06%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	17	2.77%	\$302,826	0.23%
Hispanic American Males	4	0.65%	\$717,475	0.54%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	2	0.33%	\$39,616	0.03%
Caucasian Females	69	11.24%	\$10,070,769	7.58%
Caucasian Males	515	83.88%	\$121,472,676	91.48%
TOTAL	614	100.00%	\$132,789,337	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	20	3.26%	\$399,847	0.30%
Minority Males	10	1.63%	\$846,046	0.64%
Caucasian Females	69	11.24%	\$10,070,769	7.58%
Caucasian Males	515	83.88%	\$121,472,676	91.48%
TOTAL	614	100.00%	\$132,789,337	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	30	4.89%	\$1,245,893	0.94%
Women Business Enterprises	69	11.24%	\$10,070,769	7.58%
Minority and Women Business Enterprises	99	16.12%	\$11,316,662	8.52%
Caucasian Male Business Enterprises	515	83.88%	\$121,472,676	91.48%
TOTAL	614	100.00%	\$132,789,337	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: All Contracts

Table 2.08 summarizes all contract dollars expended by the City on architecture and engineering prime contracts. Minority Business Enterprises received 8.49 percent of the architecture and engineering prime contract dollars; Women Business Enterprises received 2.83 percent; and Caucasian Male Business Enterprises received 88.68 percent.

African Americans received 2 or 1.32 percent of the architecture and engineering contracts during the study period, representing \$319,369 or 1.14 percent of the contract dollars.

Asian Americans received 5 or 3.29 percent of the architecture and engineering contracts during the study period, representing \$732,000 or 2.61 percent of the contract dollars.

Hispanic Americans received 2 or 1.32 percent of the architecture and engineering contracts during the study period, representing \$1,329,413 or 4.74 percent of the contract dollars.

Native Americans received none of the architecture and engineering contracts during the study period.

Minority Business Enterprises received 9 or 5.92 percent of the architecture and engineering contracts during the study period, representing \$2,380,781 or 8.49 percent of the contract dollars.

Women Business Enterprises received 17 or 11.18 percent of the architecture and engineering contracts during the study period, representing \$793,743 or 2.83 percent of the contract dollars.

Minority and Women Business Enterprises received 26 or 17.11 percent of the architecture and engineering contracts during the study period, representing \$3,174,525 or 11.32 percent of the contract dollars.

Caucasian Male Business Enterprises received 126 or 82.89 percent of the architecture and engineering contracts during the study period, representing \$24,858,509 or 88.68 percent of the contract dollars.



**Table 2.08 Architecture and Engineering Prime Contractor
Utilization: All Contracts, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	2	1.32%	\$319,369	1.14%
Asian Americans	5	3.29%	\$732,000	2.61%
Hispanic Americans	2	1.32%	\$1,329,413	4.74%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	17	11.18%	\$793,743	2.83%
Caucasian Males	126	82.89%	\$24,858,509	88.68%
TOTAL	152	100.00%	\$28,033,034	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	2	1.32%	\$319,369	1.14%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	5	3.29%	\$732,000	2.61%
Hispanic American Females	1	0.66%	\$1,295,933	4.62%
Hispanic American Males	1	0.66%	\$33,480	0.12%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	17	11.18%	\$793,743	2.83%
Caucasian Males	126	82.89%	\$24,858,509	88.68%
TOTAL	152	100.00%	\$28,033,034	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	1	0.66%	\$1,295,933	4.62%
Minority Males	8	5.26%	\$1,084,849	3.87%
Caucasian Females	17	11.18%	\$793,743	2.83%
Caucasian Males	126	82.89%	\$24,858,509	88.68%
TOTAL	152	100.00%	\$28,033,034	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	9	5.92%	\$2,380,781	8.49%
Women Business Enterprises	17	11.18%	\$793,743	2.83%
Minority and Women Business Enterprises	26	17.11%	\$3,174,525	11.32%
Caucasian Male Business Enterprises	126	82.89%	\$24,858,509	88.68%
TOTAL	152	100.00%	\$28,033,034	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: All Contracts

Table 2.09 summarizes all contract dollars expended by the City on professional services prime contracts. Minority Business Enterprises received 19.86 percent of the professional services prime contract dollars; Women Business Enterprises received 0.004 percent; and Caucasian Male Business Enterprises received 80.13 percent.

African Americans received 1 or 0.72 percent of the professional services contracts during the study period, representing \$500,000 or 5.41 percent of the contract dollars.

Asian Americans received 1 or 0.72 percent of the professional services contracts during the study period, representing \$104,962 or 1.14 percent of the contract dollars.

Hispanic Americans received 20 or 14.39 percent of the professional services contracts during the study period, representing \$1,217,354 or 13.18 percent of the contract dollars.

Native Americans received 3 or 2.16 percent of the professional services contracts during the study period, representing \$12,730 or 0.14 percent of the contract dollars.

Minority Business Enterprises received 25 or 17.99 percent of the professional services contracts during the study period, representing \$1,835,046 or 19.86 percent of the contract dollars.

Women Business Enterprises received 1 or 0.72 percent of the professional services contracts during the study period, representing \$339 or 0 percent of the contract dollars.

Minority and Women Business Enterprises received 26 or 18.71 percent of the professional services contracts during the study period, representing \$1,835,385 or 19.87 percent of the contract dollars.

Caucasian Male Business Enterprises received 113 or 81.29 percent of the professional services contracts during the study period, representing \$7,403,833 or 80.13 percent of the contract dollars.



**Table 2.09 Professional Services Prime Contractor Utilization:
All Contracts, October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	1	0.72%	\$500,000	5.41%
Asian Americans	1	0.72%	\$104,962	1.14%
Hispanic Americans	20	14.39%	\$1,217,354	13.18%
Native Americans	3	2.16%	\$12,730	0.14%
Caucasian Females	1	0.72%	\$339	0.00%
Caucasian Males	113	81.29%	\$7,403,833	80.13%
TOTAL	139	100.00%	\$9,239,218	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.72%	\$500,000	5.41%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	1	0.72%	\$104,962	1.14%
Hispanic American Females	19	13.67%	\$1,102,546	11.93%
Hispanic American Males	1	0.72%	\$114,808	1.24%
Native American Females	2	1.44%	\$1,100	0.01%
Native American Males	1	0.72%	\$11,630	0.13%
Caucasian Females	1	0.72%	\$339	0.00%
Caucasian Males	113	81.29%	\$7,403,833	80.13%
TOTAL	139	100.00%	\$9,239,218	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	22	15.83%	\$1,603,646	17.36%
Minority Males	3	2.16%	\$231,400	2.50%
Caucasian Females	1	0.72%	\$339	0.00%
Caucasian Males	113	81.29%	\$7,403,833	80.13%
TOTAL	139	100.00%	\$9,239,218	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	25	17.99%	\$1,835,046	19.86%
Women Business Enterprises	1	0.72%	\$339	0.00%
Minority and Women Business Enterprises	26	18.71%	\$1,835,385	19.87%
Caucasian Male Business Enterprises	113	81.29%	\$7,403,833	80.13%
TOTAL	139	100.00%	\$9,239,218	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: All Contracts

Table 2.10 summarizes all contract dollars expended by the City on non-professional services prime contracts. Minority Business Enterprises received 5.76 percent of the non-professional services prime contract dollars; Women Business Enterprises received 11.83 percent; and Caucasian Male Business Enterprises received 82.4 percent.

African Americans received 49 or 1.64 percent of the non-professional services contracts during the study period, representing \$768,217 or 1.4 percent of the contract dollars.

Asian Americans received 15 or 0.5 percent of the non-professional services contracts during the study period, representing \$1,207,094 or 2.2 percent of the contract dollars.

Hispanic Americans received 78 or 2.61 percent of the non-professional services contracts during the study period, representing \$965,947 or 1.76 percent of the contract dollars.

Native Americans received 69 or 2.31 percent of the non-professional services contracts during the study period, representing \$227,087 or 0.41 percent of the contract dollars.

Minority Business Enterprises received 211 or 7.05 percent of the non-professional services contracts during the study period, representing \$3,168,344 or 5.76 percent of the contract dollars.

Women Business Enterprises received 283 or 9.46 percent of the non-professional services contracts during the study period, representing \$6,505,788 or 11.83 percent of the contract dollars.

Minority and Women Business Enterprises received 494 or 16.51 percent of the non-professional services contracts during the study period, representing \$9,674,132 or 17.6 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,499 or 83.49 percent of the non-professional services contracts during the study period, representing \$45,303,863 or 82.4 percent of the contract dollars.



**Table 2.10 Non-Professional Services Prime Contractor
Utilization: All Contracts, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	49	1.64%	\$768,217	1.40%
Asian Americans	15	0.50%	\$1,207,094	2.20%
Hispanic Americans	78	2.61%	\$965,947	1.76%
Native Americans	69	2.31%	\$227,087	0.41%
Caucasian Females	283	9.46%	\$6,505,788	11.83%
Caucasian Males	2,499	83.49%	\$45,303,863	82.40%
TOTAL	2,993	100.00%	\$54,977,995	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	5	0.17%	\$378,567	0.69%
African American Males	44	1.47%	\$389,650	0.71%
Asian American Females	7	0.23%	\$11,255	0.02%
Asian American Males	8	0.27%	\$1,195,839	2.18%
Hispanic American Females	11	0.37%	\$246,547	0.45%
Hispanic American Males	67	2.24%	\$719,400	1.31%
Native American Females	68	2.27%	\$227,012	0.41%
Native American Males	1	0.03%	\$75	0.00%
Caucasian Females	283	9.46%	\$6,505,788	11.83%
Caucasian Males	2,499	83.49%	\$45,303,863	82.40%
TOTAL	2,993	100.00%	\$54,977,995	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	91	3.04%	\$863,381	1.57%
Minority Males	120	4.01%	\$2,304,964	4.19%
Caucasian Females	283	9.46%	\$6,505,788	11.83%
Caucasian Males	2,499	83.49%	\$45,303,863	82.40%
TOTAL	2,993	100.00%	\$54,977,995	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	211	7.05%	\$3,168,344	5.76%
Women Business Enterprises	283	9.46%	\$6,505,788	11.83%
Minority and Women Business Enterprises	494	16.51%	\$9,674,132	17.60%
Caucasian Male Business Enterprises	2,499	83.49%	\$45,303,863	82.40%
TOTAL	2,993	100.00%	\$54,977,995	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Prime Contracts under \$500,000, by Industry

1. Construction Prime Contractor Utilization: Contracts under \$500,000

Table 2.11 summarizes all contract dollars expended by the City on construction prime contracts under \$500,000. Minority Business Enterprises received 7.99 percent of the prime contract dollars; Women Business Enterprises received 8.67 percent; and Caucasian Male Business Enterprises received 83.34 percent.

African Americans received 5 or 0.91 percent of the construction contracts under \$500,000 during the study period, representing \$104,370 or 0.67 percent of the contract dollars.

Asian Americans received 2 or 0.36 percent of the construction contracts under \$500,000 during the study period, representing \$81,606 or 0.52 percent of the contract dollars.

Hispanic Americans received 21 or 3.81 percent of the construction contracts under \$500,000 during the study period, representing \$1,020,301 or 6.54 percent of the contract dollars.

Native Americans received 2 or 0.36 percent of the construction contracts under \$500,000 during the study period, representing \$39,616 or 0.25 percent of the contract dollars.

Minority Business Enterprises received 30 or 5.44 percent of the construction contracts under \$500,000 during the study period, representing \$1,245,893 or 7.99 percent of the contract dollars.

Women Business Enterprises received 62 or 11.25 percent of the construction contracts under \$500,000 during the study period, representing \$1,351,217 or 8.67 percent of the contract dollars.

Minority and Women Business Enterprises received 92 or 16.7 percent of the construction contracts under \$500,000 during the study period, representing \$2,597,110 or 16.66 percent of the contract dollars.

Caucasian Male Business Enterprises received 459 or 83.3 percent of the construction contracts under \$500,000 during the study period, representing \$12,995,676 or 83.34 percent of the contract dollars.



**Table 2.11 Construction Prime Contractor Utilization:
Contracts under \$500,000, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	5	0.91%	\$104,370	0.67%
Asian Americans	2	0.36%	\$81,606	0.52%
Hispanic Americans	21	3.81%	\$1,020,301	6.54%
Native Americans	2	0.36%	\$39,616	0.25%
Caucasian Females	62	11.25%	\$1,351,217	8.67%
Caucasian Males	459	83.30%	\$12,995,676	83.34%
TOTAL	551	100.00%	\$15,592,785	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.18%	\$15,415	0.10%
African American Males	4	0.73%	\$88,955	0.57%
Asian American Females	2	0.36%	\$81,606	0.52%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	17	3.09%	\$302,826	1.94%
Hispanic American Males	4	0.73%	\$717,475	4.60%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	2	0.36%	\$39,616	0.25%
Caucasian Females	62	11.25%	\$1,351,217	8.67%
Caucasian Males	459	83.30%	\$12,995,676	83.34%
TOTAL	551	100.00%	\$15,592,785	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	20	3.63%	\$399,847	2.56%
Minority Males	10	1.81%	\$846,046	5.43%
Caucasian Females	62	11.25%	\$1,351,217	8.67%
Caucasian Males	459	83.30%	\$12,995,676	83.34%
TOTAL	551	100.00%	\$15,592,785	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	30	5.44%	\$1,245,893	7.99%
Women Business Enterprises	62	11.25%	\$1,351,217	8.67%
Minority and Women Business Enterprises	92	16.70%	\$2,597,110	16.66%
Caucasian Male Business Enterprises	459	83.30%	\$12,995,676	83.34%
TOTAL	551	100.00%	\$15,592,785	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: Contracts under \$500,000

Table 2.12 summarizes all contract dollars expended by the City on architecture and engineering prime contracts under \$500,000. Minority Business Enterprises received 11.37 percent of the architecture and engineering prime contract dollars; Women Business Enterprises received 8.32 percent; and Caucasian Male Business Enterprises received 80.31 percent.

African Americans received 2 or 1.38 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$319,369 or 3.35 percent of the contract dollars.

Asian Americans received 5 or 3.45 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$732,000 or 7.67 percent of the contract dollars.

Hispanic Americans received 1 or 0.69 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$33,480 or 0.35 percent of the contract dollars.

Native Americans received none of the architecture and engineering contracts under \$500,000 during the study period.

Minority Business Enterprises received 8 or 5.52 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$1,084,849 or 11.37 percent of the contract dollars.

Women Business Enterprises received 17 or 11.72 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$793,743 or 8.32 percent of the contract dollars.

Minority and Women Business Enterprises received 25 or 17.24 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$1,878,592 or 19.69 percent of the contract dollars.

Caucasian Male Business Enterprises received 120 or 82.76 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$7,660,622 or 80.31 percent of the contract dollars.



**Table 2.12 Architecture and Engineering Prime Contractor
Utilization: Contracts under \$500,000, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	2	1.38%	\$319,369	3.35%
Asian Americans	5	3.45%	\$732,000	7.67%
Hispanic Americans	1	0.69%	\$33,480	0.35%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	17	11.72%	\$793,743	8.32%
Caucasian Males	120	82.76%	\$7,660,622	80.31%
TOTAL	145	100.00%	\$9,539,214	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	2	1.38%	\$319,369	3.35%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	5	3.45%	\$732,000	7.67%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	1	0.69%	\$33,480	0.35%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	17	11.72%	\$793,743	8.32%
Caucasian Males	120	82.76%	\$7,660,622	80.31%
TOTAL	145	100.00%	\$9,539,214	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	8	5.52%	\$1,084,849	11.37%
Caucasian Females	17	11.72%	\$793,743	8.32%
Caucasian Males	120	82.76%	\$7,660,622	80.31%
TOTAL	145	100.00%	\$9,539,214	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	8	5.52%	\$1,084,849	11.37%
Women Business Enterprises	17	11.72%	\$793,743	8.32%
Minority and Women Business Enterprises	25	17.24%	\$1,878,592	19.69%
Caucasian Male Business Enterprises	120	82.76%	\$7,660,622	80.31%
TOTAL	145	100.00%	\$9,539,214	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: Contracts under \$500,000

Table 2.13 summarizes all contract dollars expended by the City on professional services prime contracts under \$500,000. Minority Business Enterprises received 23.35 percent of the professional services prime contract dollars; Women Business Enterprises received 0.01 percent; and Caucasian Male Business Enterprises received 76.65 percent.

African Americans received none of the professional services contracts under \$500,000 during the study period.

Asian Americans received 1 or 0.74 percent of the professional services contracts under \$500,000 during the study period, representing \$104,962 or 1.84 percent of the contract dollars.

Hispanic Americans received 20 or 14.81 percent of the professional services contracts under \$500,000 during the study period, representing \$1,217,354 or 21.29 percent of the contract dollars.

Native Americans received 3 or 2.22 percent of the professional services contracts under \$500,000 during the study period, representing \$12,730 or 0.22 percent of the contract dollars.

Minority Business Enterprises received 24 or 17.78 percent of the professional services contracts under \$500,000 during the study period, representing \$1,335,046 or 23.35 percent of the contract dollars.

Women Business Enterprises received 1 or 0.74 percent of the professional services contracts under \$500,000 during the study period, representing \$339 or 0.01 percent of the contract dollars.

Minority and Women Business Enterprises received 25 or 18.52 percent of the professional services contracts under \$500,000 during the study period, representing \$1,335,385 or 23.35 percent of the contract dollars.

Caucasian Male Business Enterprises received 110 or 81.48 percent of the professional services contracts under \$500,000 during the study period, representing \$4,382,425 or 76.65 percent of the contract dollars.



**Table 2.13 Professional Services Prime Contractor Utilization:
Contracts under \$500,000, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	1	0.74%	\$104,962	1.84%
Hispanic Americans	20	14.81%	\$1,217,354	21.29%
Native Americans	3	2.22%	\$12,730	0.22%
Caucasian Females	1	0.74%	\$339	0.01%
Caucasian Males	110	81.48%	\$4,382,425	76.65%
TOTAL	135	100.00%	\$5,717,810	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	1	0.74%	\$104,962	1.84%
Hispanic American Females	19	14.07%	\$1,102,546	19.28%
Hispanic American Males	1	0.74%	\$114,808	2.01%
Native American Females	2	1.48%	\$1,100	0.02%
Native American Males	1	0.74%	\$11,630	0.20%
Caucasian Females	1	0.74%	\$339	0.01%
Caucasian Males	110	81.48%	\$4,382,425	76.65%
TOTAL	135	100.00%	\$5,717,810	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	21	15.56%	\$1,103,646	19.30%
Minority Males	3	2.22%	\$231,400	4.05%
Caucasian Females	1	0.74%	\$339	0.01%
Caucasian Males	110	81.48%	\$4,382,425	76.65%
TOTAL	135	100.00%	\$5,717,810	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	24	17.78%	\$1,335,046	23.35%
Women Business Enterprises	1	0.74%	\$339	0.01%
Minority and Women Business Enterprises	25	18.52%	\$1,335,385	23.35%
Caucasian Male Business Enterprises	110	81.48%	\$4,382,425	76.65%
TOTAL	135	100.00%	\$5,717,810	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: Contracts under \$500,000

Table 2.14 summarizes all contract dollars expended by the City on non-professional services prime contracts under \$500,000. Minority Business Enterprises received 11.58 percent of the non-professional services prime contract dollars; Women Business Enterprises received 5.81 percent; and Caucasian Male Business Enterprises received 82.61 percent.

African Americans received 49 or 1.65 percent of the non-professional services contracts under \$500,000 during the study period, representing \$768,217 or 2.81 percent of the contract dollars.

Asian Americans received 15 or 0.51 percent of the non-professional services contracts under \$500,000 during the study period, representing \$1,207,094 or 4.41 percent of the contract dollars.

Hispanic Americans received 78 or 2.63 percent of the non-professional services contracts under \$500,000 during the study period, representing \$965,947 or 3.53 percent of the contract dollars.

Native Americans received 69 or 2.32 percent of the non-professional services contracts under \$500,000 during the study period, representing \$227,087 or 0.83 percent of the contract dollars.

Minority Business Enterprises received 211 or 7.1 percent of the non-professional services contracts under \$500,000 during the study period, representing \$3,168,344 or 11.58 percent of the contract dollars.

Women Business Enterprises received 279 or 9.39 percent of the non-professional services contracts under \$500,000 during the study period, representing \$1,589,458 or 5.81 percent of the contract dollars.

Minority and Women Business Enterprises received 490 or 16.5 percent of the non-professional services contracts under \$500,000 during the study period, representing \$4,757,803 or 17.39 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,480 or 83.5 percent of the non-professional services contracts under \$500,000 during the study period, representing \$22,601,776 or 82.61 percent of the contract dollars.



**Table 2.14 Non-Professional Services Prime Contractor
Utilization: Contracts under \$500,000, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	49	1.65%	\$768,217	2.81%
Asian Americans	15	0.51%	\$1,207,094	4.41%
Hispanic Americans	78	2.63%	\$965,947	3.53%
Native Americans	69	2.32%	\$227,087	0.83%
Caucasian Females	279	9.39%	\$1,589,458	5.81%
Caucasian Males	2,480	83.50%	\$22,601,776	82.61%
TOTAL	2,970	100.00%	\$27,359,579	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	5	0.17%	\$378,567	1.38%
African American Males	44	1.48%	\$389,650	1.42%
Asian American Females	7	0.24%	\$11,255	0.04%
Asian American Males	8	0.27%	\$1,195,839	4.37%
Hispanic American Females	11	0.37%	\$246,547	0.90%
Hispanic American Males	67	2.26%	\$719,400	2.63%
Native American Females	68	2.29%	\$227,012	0.83%
Native American Males	1	0.03%	\$75	0.00%
Caucasian Females	279	9.39%	\$1,589,458	5.81%
Caucasian Males	2,480	83.50%	\$22,601,776	82.61%
TOTAL	2,970	100.00%	\$27,359,579	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	91	3.06%	\$863,381	3.16%
Minority Males	120	4.04%	\$2,304,964	8.42%
Caucasian Females	279	9.39%	\$1,589,458	5.81%
Caucasian Males	2,480	83.50%	\$22,601,776	82.61%
TOTAL	2,970	100.00%	\$27,359,579	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	211	7.10%	\$3,168,344	11.58%
Women Business Enterprises	279	9.39%	\$1,589,458	5.81%
Minority and Women Business Enterprises	490	16.50%	\$4,757,803	17.39%
Caucasian Male Business Enterprises	2,480	83.50%	\$22,601,776	82.61%
TOTAL	2,970	100.00%	\$27,359,579	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



E. Informal Contracts \$25,000 and under, by Industry

1. Construction Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.15 summarizes all contract dollars expended by the City on construction prime contracts \$25,000 and under. Minority Business Enterprises received 10.26 percent of the construction prime contract dollars; Women Business Enterprises received 13.65 percent; and Caucasian Male Business Enterprises received 76.09 percent.

African Americans received 3 or 0.65 percent of the construction contracts \$25,000 and under during the study period, representing \$35,368 or 2 percent of the contract dollars.

Asian Americans received 1 or 0.22 percent of the construction contracts \$25,000 and under during the study period, representing \$19,625 or 1.11 percent of the contract dollars.

Hispanic Americans received 15 or 3.25 percent of the construction contracts \$25,000 and under during the study period, representing \$86,985 or 4.91 percent of the contract dollars.

Native Americans received 2 or 0.43 percent of the construction contracts \$25,000 and under during the study period, representing \$39,616 or 2.24 percent of the contract dollars.

Minority Business Enterprises received 21 or 4.56 percent of the construction contracts \$25,000 and under during the study period, representing \$181,594 or 10.26 percent of the contract dollars.

Women Business Enterprises received 55 or 11.93 percent of the construction contracts \$25,000 and under during the study period, representing \$241,560 or 13.65 percent of the contract dollars.

Minority and Women Business Enterprises received 76 or 16.49 percent of the construction contracts \$25,000 and under during the study period, representing \$423,154 or 23.91 percent of the contract dollars.

Caucasian Male Business Enterprises received 385 or 83.51 percent of the construction contracts \$25,000 and under during the study period, representing \$1,346,679 or 76.09 percent of the contract dollars.



**Table 2.15 Construction Prime Contractor Utilization:
Contracts \$25,000 and under, October 1, 2002 to September
30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	3	0.65%	\$35,368	2.00%
Asian Americans	1	0.22%	\$19,625	1.11%
Hispanic Americans	15	3.25%	\$86,985	4.91%
Native Americans	2	0.43%	\$39,616	2.24%
Caucasian Females	55	11.93%	\$241,560	13.65%
Caucasian Males	385	83.51%	\$1,346,679	76.09%
TOTAL	461	100.00%	\$1,769,834	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.22%	\$15,415	0.87%
African American Males	2	0.43%	\$19,953	1.13%
Asian American Females	1	0.22%	\$19,625	1.11%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	14	3.04%	\$84,885	4.80%
Hispanic American Males	1	0.22%	\$2,100	0.12%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	2	0.43%	\$39,616	2.24%
Caucasian Females	55	11.93%	\$241,560	13.65%
Caucasian Males	385	83.51%	\$1,346,679	76.09%
TOTAL	461	100.00%	\$1,769,834	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	16	3.47%	\$119,925	6.78%
Minority Males	5	1.08%	\$61,669	3.48%
Caucasian Females	55	11.93%	\$241,560	13.65%
Caucasian Males	385	83.51%	\$1,346,679	76.09%
TOTAL	461	100.00%	\$1,769,834	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	21	4.56%	\$181,594	10.26%
Women Business Enterprises	55	11.93%	\$241,560	13.65%
Minority and Women Business Enterprises	76	16.49%	\$423,154	23.91%
Caucasian Male Business Enterprises	385	83.51%	\$1,346,679	76.09%
TOTAL	461	100.00%	\$1,769,834	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.16 summarizes all contract dollars expended by the City on architecture and engineering prime contracts \$25,000 and under. Minority Business Enterprises received 1.19 percent of the architecture and engineering prime contract dollars; Women Business Enterprises received 14.03 percent; and Caucasian Male Business Enterprises received 84.78 percent.

African Americans received none of the architecture and engineering contracts \$25,000 and under during the study period.

Asian Americans received 1 or 1.22 percent of the architecture and engineering contracts \$25,000 and under during the study period, representing \$5,720 or 1.19 percent of the contract dollars.

Hispanic Americans received none of the architecture and engineering contracts \$25,000 and under during the study period.

Native Americans received none of the architecture and engineering contracts \$25,000 and under during the study period.

Minority Business Enterprises received 1 or 1.22 percent of the architecture and engineering contracts \$25,000 and under during the study period, representing \$5,720 or 1.19 percent of the contract dollars.

Women Business Enterprises received 13 or 15.85 percent of the architecture and engineering contracts \$25,000 and under during the study period, representing \$67,679 or 14.03 percent of the contract dollars.

Minority and Women Business Enterprises received 14 or 17.07 percent of the architecture and engineering contracts \$25,000 and under during the study period, representing \$73,399 or 15.22 percent of the contract dollars.

Caucasian Male Business Enterprises received 68 or 82.93 percent of the architecture and engineering contracts \$25,000 and under during the study period, representing \$408,865 or 84.78 percent of the contract dollars.



**Table 2.16 Architecture and Engineering Prime Contractor
Utilization: Contracts \$25,000 and under, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	1	1.22%	\$5,720	1.19%
Hispanic Americans	0	0.00%	\$0	0.00%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	13	15.85%	\$67,679	14.03%
Caucasian Males	68	82.93%	\$408,865	84.78%
TOTAL	82	100.00%	\$482,264	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	1	1.22%	\$5,720	1.19%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	13	15.85%	\$67,679	14.03%
Caucasian Males	68	82.93%	\$408,865	84.78%
TOTAL	82	100.00%	\$482,264	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	1	1.22%	\$5,720	1.19%
Caucasian Females	13	15.85%	\$67,679	14.03%
Caucasian Males	68	82.93%	\$408,865	84.78%
TOTAL	82	100.00%	\$482,264	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	1	1.22%	\$5,720	1.19%
Women Business Enterprises	13	15.85%	\$67,679	14.03%
Minority and Women Business Enterprises	14	17.07%	\$73,399	15.22%
Caucasian Male Business Enterprises	68	82.93%	\$408,865	84.78%
TOTAL	82	100.00%	\$482,264	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.17 summarizes all contract dollars expended by the City on professional services prime contracts \$25,000 and under. Minority Business Enterprises received 7.07 percent of the professional services prime contract dollars; Women Business Enterprises received 0.07 percent; and Caucasian Male Business Enterprises received 92.87 percent.

African Americans received none of the professional services contracts \$25,000 and under during the study period.

Asian Americans received none of the professional services contracts \$25,000 and under during the study period.

Hispanic Americans received 14 or 15.56 percent of the professional services contracts \$25,000 and under during the study period, representing \$22,871 or 4.54 percent of the contract dollars.

Native Americans received 3 or 3.33 percent of the professional services contracts \$25,000 and under during the study period, representing \$12,730 or 2.53 percent of the contract dollars.

Minority Business Enterprises received 17 or 18.89 percent of the professional services contracts \$25,000 and under during the study period, representing \$35,601 or 7.07 percent of the contract dollars.

Women Business Enterprises received 1 or 1.11 percent of the professional services contracts \$25,000 and under during the study period, representing \$339 or 0.07 percent of the contract dollars.

Minority and Women Business Enterprises received 18 or 20 percent of the professional services contracts \$25,000 and under during the study period, representing \$35,940 or 7.13 percent of the contract dollars.

Caucasian Male Business Enterprises received 72 or 80 percent of the professional services contracts \$25,000 and under during the study period, representing \$467,790 or 92.87 percent of the contract dollars.



**Table 2.17 Professional Services Prime Contractor Utilization:
Contracts \$25,000 and under, October 1, 2002 to September
30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	14	15.56%	\$22,871	4.54%
Native Americans	3	3.33%	\$12,730	2.53%
Caucasian Females	1	1.11%	\$339	0.07%
Caucasian Males	72	80.00%	\$467,790	92.87%
TOTAL	90	100.00%	\$503,730	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	14	15.56%	\$22,871	4.54%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	2	2.22%	\$1,100	0.22%
Native American Males	1	1.11%	\$11,630	2.31%
Caucasian Females	1	1.11%	\$339	0.07%
Caucasian Males	72	80.00%	\$467,790	92.87%
TOTAL	90	100.00%	\$503,730	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	16	17.78%	\$23,971	4.76%
Minority Males	1	1.11%	\$11,630	2.31%
Caucasian Females	1	1.11%	\$339	0.07%
Caucasian Males	72	80.00%	\$467,790	92.87%
TOTAL	90	100.00%	\$503,730	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	17	18.89%	\$35,601	7.07%
Women Business Enterprises	1	1.11%	\$339	0.07%
Minority and Women Business Enterprises	18	20.00%	\$35,940	7.13%
Caucasian Male Business Enterprises	72	80.00%	\$467,790	92.87%
TOTAL	90	100.00%	\$503,730	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.18 summarizes all contract dollars expended by the City on non-professional services prime contracts \$25,000 and under. Minority Business Enterprises received 6.81 percent of the non-professional services prime contract dollars; Women Business Enterprises received 12.48 percent; and Caucasian Male Business Enterprises received 80.71 percent.

African Americans received 39 or 1.4 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$121,822 or 1.72 percent of the contract dollars.

Asian Americans received 10 or 0.36 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$52,025 or 0.74 percent of the contract dollars.

Hispanic Americans received 71 or 2.56 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$251,619 or 3.56 percent of the contract dollars.

Native Americans received 66 or 2.38 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$55,815 or 0.79 percent of the contract dollars.

Minority Business Enterprises received 186 or 6.7 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$481,280 or 6.81 percent of the contract dollars.

Women Business Enterprises received 268 or 9.65 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$881,471 or 12.48 percent of the contract dollars.

Minority and Women Business Enterprises received 454 or 16.35 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$1,362,752 or 19.29 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,322 or 83.65 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$5,702,496 or 80.71 percent of the contract dollars.



**Table 2.18 Non-Professional Services Prime Contractor
Utilization: Contracts \$25,000 and under, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	39	1.40%	\$121,822	1.72%
Asian Americans	10	0.36%	\$52,025	0.74%
Hispanic Americans	71	2.56%	\$251,619	3.56%
Native Americans	66	2.38%	\$55,815	0.79%
Caucasian Females	268	9.65%	\$881,471	12.48%
Caucasian Males	2,322	83.65%	\$5,702,496	80.71%
TOTAL	2,776	100.00%	\$7,065,247	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.04%	\$13,501	0.19%
African American Males	38	1.37%	\$108,321	1.53%
Asian American Females	7	0.25%	\$11,255	0.16%
Asian American Males	3	0.11%	\$40,770	0.58%
Hispanic American Females	10	0.36%	\$22,807	0.32%
Hispanic American Males	61	2.20%	\$228,812	3.24%
Native American Females	65	2.34%	\$55,740	0.79%
Native American Males	1	0.04%	\$75	0.00%
Caucasian Females	268	9.65%	\$881,471	12.48%
Caucasian Males	2,322	83.65%	\$5,702,496	80.71%
TOTAL	2,776	100.00%	\$7,065,247	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	83	2.99%	\$103,302	1.46%
Minority Males	103	3.71%	\$377,978	5.35%
Caucasian Females	268	9.65%	\$881,471	12.48%
Caucasian Males	2,322	83.65%	\$5,702,496	80.71%
TOTAL	2,776	100.00%	\$7,065,247	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	186	6.70%	\$481,280	6.81%
Women Business Enterprises	268	9.65%	\$881,471	12.48%
Minority and Women Business Enterprises	454	16.35%	\$1,362,752	19.29%
Caucasian Male Business Enterprises	2,322	83.65%	\$5,702,496	80.71%
TOTAL	2,776	100.00%	\$7,065,247	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



V. SUMMARY

The City's prime contractor utilization analysis examined the \$225,039,584 expended on 3,898 prime contracts awarded between October 1, 2002 to September 30, 2007. The \$225,039,584 expended included \$132,789,337 for construction, \$28,033,034 for architecture and engineering, \$9,239,218 for professional services, and \$54,977,995 for non-professional services. A total of 3,898 contracts were analyzed, which included 614 for construction, 152 for architecture and engineering services, 139 for professional services, and 2,993 for non-professional services.

The utilization analysis was performed separately for informal and formal prime contracts. The informal levels included contracts \$25,000 and under for construction, contracts \$25,000 and under for architecture and engineering, contracts \$25,000 and under for professional services, and contracts \$25,000 and under for non-professional services. The analysis of formal contracts was limited to contracts under \$500,000 for each industry. *Chapter 6: Prime Contractor Disparity Analysis* presents the statistical analysis of disparity in each of the four industries.





3

SUBCONTRACTOR UTILIZATION ANALYSIS

I. INTRODUCTION

As discussed in *Chapter 2: Prime Contractor Utilization Analysis*, the first step in a disparity study is the analysis of the jurisdiction's expenditures to document the contracting history of minority and woman-owned businesses (M/WBE). The objective of this Chapter is to determine the level of minority and woman-owned business enterprise subcontract utilization by ethnicity and gender compared to Caucasian male subcontractor utilization. The utilization of subcontractors on the City of Arlington's (City's) prime contracts is documented by ethnicity and gender for awards made from October 1, 2002 to September 30, 2007.

II. SUBCONTRACTOR UTILIZATION DATA SOURCES

Extensive efforts were undertaken to obtain subcontract records for the City's construction, architecture and engineering, and professional services contracts. There were not sufficient architecture and engineering or professional services contracts to perform a disparity analysis. Subcontracts for non-professional services contracts were not included in the research because they traditionally do not include significant subcontracting activity.

Several sources of data were used to reconstruct the subcontractor data for the three industries. The City provided Mason Tillman with subcontractor data extracted from their electronic files as the first source of data. The second source was subcontractor information extracted from a review of the City's project files. The third source was a prime contractor expenditure survey conducted with the City's prime contractors to request their subcontractors for each prime contract awarded during the study period. For each contract the prime contractors were asked to provide the name, award, and payment amounts for each



of the subcontractors used. Subcontractors identified from the various sources were then surveyed to verify their participation and payment for the prime contracts on which they were listed. The City staff encouraged the prime contractors and subcontractors to respond to each survey.

A total of 159 subcontracts were identified for 37 construction, architecture and engineering, and professional services prime contracts valued at \$50,000 and more. The 159 subcontracts were awarded during the five-year study period, October 1, 2002 to September 30, 2007.

The assistance of the City staff was an invaluable resource. Without the City staff cooperation, the collection of 159 subcontract records would not have been possible.

III. SUBCONTRACTOR UTILIZATION ANALYSIS

The subcontracts in the three industries were analyzed. The construction subcontracts were divided into horizontal and vertical contracts for the analysis. Horizontal construction includes streets and roads. Vertical construction includes construction of buildings and other structures. The construction subcontracts were separated to determine if the M/WBE participation patterns were different.

As depicted in Table 3.01 below, the 159 subcontracts analyzed included 114 horizontal construction, 20 vertical construction, 24 architecture and engineering subcontracts, and 1 professional services subcontracts. A total of \$22,521,767 dollars were expended on the 159 subcontracts of which \$13,712,479 were for horizontal construction, \$4,550,068 were for vertical construction, \$4,256,220 for architecture and engineering, and \$3,100 for professional services subcontracts.



Table 3.01 Total Subcontract Dollars: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Subcontracts	Total Dollars Expended
Horizontal Construction	114	\$13,712,479
Vertical Construction ¹	20	\$4,550,068
Architecture and Engineering ²	24	\$4,256,220
Professional Services ³	1	\$3,100
Total	159	\$22,521,867

¹ There were not sufficient vertical construction subcontracts to perform a disparity analysis

² There were not sufficient architecture and engineering subcontracts to perform a disparity analysis

³ There were not sufficient professional services subcontracts to perform a disparity analysis



A. Construction Utilization: All Subcontracts

1. Horizontal Construction Subcontracts

Table 3.02 depicts horizontal construction subcontracts awarded by prime contractors. Minority Business Enterprises received 4.17 percent of the horizontal construction subcontract dollars; Women Business Enterprises received 17.16 percent; and Caucasian Male Business Enterprises received 78.67 percent. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses received 1 or 0.88 percent of the horizontal construction subcontracts during the study period, representing \$21,630 or 0.16 percent of the subcontract dollars.

Asian American Businesses received none of the horizontal construction subcontracts during the study period.

Hispanic American Businesses received 9 or 7.89 percent of the horizontal construction subcontracts during the study period, representing \$549,765 or 4.01 percent of the subcontract dollars.

Native American Businesses received none of the horizontal construction subcontracts during the study period.

Minority Business Enterprises received 10 or 8.77 percent of the horizontal construction subcontracts during the study period, representing \$571,395 or 4.17 percent of the subcontract dollars.

Women Business Enterprises received 18 or 15.79 percent of the horizontal construction subcontracts during the study period, representing \$2,353,199 or 17.16 percent of the subcontract dollars.

Minority and Women Business Enterprises received 28 or 24.56 percent of the horizontal construction subcontracts during the study period, representing \$2,924,594 or 21.33 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 86 or 75.44 percent of the horizontal construction subcontracts during the study period, representing \$10,787,885 or 78.67 percent of the subcontract dollars.



Table 3.02 Horizontal Construction Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	1	0.88%	\$21,630	0.16%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	9	7.89%	\$549,765	4.01%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	18	15.79%	\$2,353,199	17.16%
Caucasian Males	86	75.44%	\$10,787,885	78.67%
TOTAL	114	100.00%	\$13,712,479	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	1	0.88%	\$21,630	0.16%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	3	2.63%	\$26,521	0.19%
Hispanic American Males	6	5.26%	\$523,244	3.82%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	18	15.79%	\$2,353,199	17.16%
Caucasian Males	86	75.44%	\$10,787,885	78.67%
TOTAL	114	100.00%	13,712,479	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	3	2.63%	\$26,521	0.19%
Minority Males	7	6.14%	\$544,874	3.97%
Caucasian Females	18	15.79%	\$2,353,199	17.16%
Caucasian Males	86	75.44%	\$10,787,885	78.67%
TOTAL	114	100.00%	\$13,712,479	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	10	8.77%	\$571,395	4.17%
Women Business Enterprises	18	15.79%	\$2,353,199	17.16%
Minority and Women Business Enterprises	28	24.56%	\$2,924,594	21.33%
Caucasian Male Business Enterprises	86	75.44%	\$10,787,885	78.67%
TOTAL	114	100.00%	\$13,712,479	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Vertical Construction Subcontracts

Table 3.03 depicts vertical construction subcontracts awarded by prime contractors. Minority Business Enterprises received 6.26 percent of the vertical construction subcontract dollars; Women Business Enterprises received 0.1 percent; and Caucasian Male Business Enterprises received 93.64 percent.

African American Businesses received none of the vertical construction subcontracts during the study period.

Asian American Businesses received none of the vertical construction subcontracts during the study period.

Hispanic American Businesses received 2 or 10 percent of the vertical construction subcontracts during the study period, representing \$284,836 or 6.26 percent of the subcontract dollars.

Native American Businesses received none of the vertical construction subcontracts during the study period.

Minority Business Enterprises received 2 or 10 percent of the vertical construction subcontracts during the study period, representing \$284,836 or 6.26 percent of the subcontract dollars.

Women Business Enterprises received 1 or 5 percent of the vertical construction subcontracts during the study period, representing \$4,722 or 0.1 percent of the subcontract dollars.

Minority and Women Business Enterprises received 3 or 15 percent of the vertical construction subcontracts during the study period, representing \$289,558 or 6.36 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 17 or 85 percent of the vertical construction subcontracts during the study period, representing \$4,260,510 or 93.64 percent of the subcontract dollars.



**Table 3.03 Vertical Construction Utilization: All
Subcontracts, October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	2	10.00%	\$284,836	6.26%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	1	5.00%	\$4,722	0.10%
Caucasian Males	17	85.00%	\$4,260,510	93.64%
TOTAL	20	100.00%	\$4,550,068	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	1	5.00%	\$40,260	0.88%
Hispanic American Males	1	5.00%	\$244,576	5.38%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	1	5.00%	\$4,722	0.10%
Caucasian Males	17	85.00%	\$4,260,510	93.64%
TOTAL	20	100.00%	4,550,068	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	1	5.00%	\$40,260	0.88%
Minority Males	1	5.00%	\$244,576	5.38%
Caucasian Females	1	5.00%	\$4,722	0.10%
Caucasian Males	17	85.00%	\$4,260,510	93.64%
TOTAL	20	100.00%	\$4,550,068	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	2	10.00%	\$284,836	6.26%
Women Business Enterprises	1	5.00%	\$4,722	0.10%
Minority and Women Business Enterprises	3	15.00%	\$289,558	6.36%
Caucasian Male Business Enterprises	17	85.00%	\$4,260,510	93.64%
TOTAL	20	100.00%	\$4,550,068	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



B. Architecture and Engineering Utilization: All Subcontracts

Table 3.04 depicts architecture and engineering subcontracts awarded by prime contractors. Minority Business Enterprises received 10.58 percent of the architecture and engineering subcontract dollars; Women Business Enterprises received 1.2 percent; and Caucasian Male Business Enterprises received 88.21 percent.

African American Businesses received none of the architecture and engineering construction subcontracts during the study period.

Asian American Businesses received 1 or 4.17 percent of the architecture and engineering subcontracts during the study period, representing \$211,333 or 4.97 percent of the subcontracting dollars.

Hispanic American Businesses received 2 or 8.33 percent of the architecture and engineering subcontracts during the study period, representing \$202,608 or 4.76 percent of the subcontracting dollars.

Native American Businesses received 1 or 4.17 percent of the architecture and engineering subcontracts during the study period; representing \$36,470 or 0.86 percent of the subcontracting dollars.

Minority Business Enterprises received 4 or 16.67 percent of the architecture and engineering subcontracts during the study period, representing \$450,410 or 10.58 percent of the subcontract dollars.

Women Business Enterprises received 2 or 8.33 percent of the architecture and engineering subcontracts during the study period, representing \$51,192 or 1.2 percent of the subcontract dollars.

Minority and Women Business Enterprises received 6 or 25 percent of the architecture and engineering subcontracts during the study period, representing \$501,602 or 11.79 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 18 or 75 percent of the architecture and engineering subcontracts during the study period, representing \$3,754,617 or 88.21 percent of the subcontract dollars.



Table 3.04 Architecture and Engineering Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	1	4.17%	\$211,333	4.97%
Hispanic Americans	2	8.33%	\$202,608	4.76%
Native Americans	1	4.17%	\$36,470	0.86%
Caucasian Females	2	8.33%	\$51,192	1.20%
Caucasian Males	18	75.00%	\$3,754,617	88.21%
TOTAL	24	100.00%	\$4,256,220	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	1	4.17%	\$211,333	4.97%
Hispanic American Females	1	4.17%	\$157,608	3.70%
Hispanic American Males	1	4.17%	\$45,000	1.06%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	1	4.17%	\$36,470	0.86%
Caucasian Females	2	8.33%	\$51,192	1.20%
Caucasian Males	18	75.00%	\$3,754,617	88.21%
TOTAL	24	100.00%	4,256,220	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	1	4.17%	\$157,608	3.70%
Minority Males	3	12.50%	\$292,803	6.88%
Caucasian Females	2	8.33%	\$51,192	1.20%
Caucasian Males	18	75.00%	\$3,754,617	88.21%
TOTAL	24	100.00%	\$4,256,220	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	4	16.67%	\$450,410	10.58%
Women Business Enterprises	2	8.33%	\$51,192	1.20%
Minority and Women Business Enterprises	6	25.00%	\$501,602	11.79%
Caucasian Male Business Enterprises	18	75.00%	\$3,754,617	88.21%
TOTAL	24	100.00%	\$4,256,220	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



C. Professional Services Utilization: All Subcontracts

Table 3.05 depicts professional services subcontracts awarded by prime contractors. Minority Business Enterprises received none of the professional services subcontract dollars; Women Business Enterprises received 100 percent; and Caucasian Male Business Enterprises received none.

African American Businesses received none of the professional services construction subcontracts during the study period.

Asian American Businesses received none of the professional services construction subcontracts during the study period.

Hispanic American Businesses received none of the professional services construction subcontracts during the study period.

Native American Businesses received none of the professional services construction subcontracts during the study period.

Minority Business Enterprises received none of the professional services construction subcontracts during the study period.

Women Business Enterprises received 1 or 100 percent of the professional services subcontracts during the study period, representing \$3,100 or 100 percent of the subcontract dollars.

Minority and Women Business Enterprises received 1 or 100 percent of the professional services subcontracts during the study period, representing \$3,100 or 100 percent of the subcontract dollars.

Caucasian Male Business Enterprises received none of the professional services construction subcontracts during the study period.



Table 3.05 Professional Services Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	0	0.00%	\$0	0.00%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	1	100.00%	\$3,100	100.00%
Caucasian Males	0	0.00%	\$0	0.00%
TOTAL	1	100.00%	\$3,100	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	1	100.00%	\$3,100	100.00%
Caucasian Males	0	0.00%	\$0	0.00%
TOTAL	1	100.00%	3,100	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	0	0.00%	\$0	0.00%
Caucasian Females	1	100.00%	\$3,100	100.00%
Caucasian Males	0	0.00%	\$0	0.00%
TOTAL	1	100.00%	\$3,100	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	0	0.00%	\$0	0.00%
Women Business Enterprises	1	100.00%	\$3,100	100.00%
Minority and Women Business Enterprises	1	100.00%	\$3,100	100.00%
Caucasian Male Business Enterprises	0	0.00%	\$0	0.00%
TOTAL	1	100.00%	\$3,100	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4

MARKET AREA ANALYSIS

I. MARKET AREA DEFINITION

A. Legal Criteria for Geographic Market Area

The Supreme Court's decision in *City of Richmond v. J.A. Croson Co.*¹ held that programs established by local governments to set goals for the participation of minority and woman-owned firms, must be supported by evidence of past discrimination in the awarding of their contracts.

Prior to the *Croson* decision, many agencies and jurisdictions implementing race-conscious programs did so without developing a detailed public record to document discrimination in their awarding of contracts. Instead, they relied upon common knowledge and what was viewed as widely-recognized patterns of discrimination, both local and national.²

Croson established that a local government could not rely on society-wide discrimination as the basis for a race-based program, but, instead, was required to identify discrimination within its own jurisdiction.³ In *Croson*, the Court found the City of Richmond's Minority Business Enterprise (MBE) construction program to be unconstitutional because there was insufficient evidence of discrimination in the *local construction market*.

Croson was explicit in saying that the *local construction market* was the appropriate geographical framework within which to perform statistical comparisons of business availability and business utilization. Therefore, the identification of the local market area is

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

² *United Steelworkers v. Weber*, 433 U.S. 193, 198, n. 1 (1979).

³ *Croson*, 488 U.S. at 497 (1989).



particularly important because that factor establishes the parameters within which to conduct a disparity study.

B. Application of the Croson Standard

While *Croson* emphasized the importance of the local market area, it provided little assistance in defining its parameters.⁴ It, however, is informative to review the Court's definition of the City of Richmond's market area. In discussing the scope of the constitutional violation that must be investigated, the Court interchangeably used the terms "relevant market,"⁵ "Richmond construction industry,"⁶ and "city's construction industry"⁷ to define the proper scope of the examination of the existence of discrimination within the City. This interchangeable use of terms lends support to a definition of market area that coincides with the boundaries of a jurisdiction.

In analyzing the cases following *Croson*, a pattern emerges that provides additional guidance. The body of cases examining market area support a definition of market area that is reasonable.⁸ In *Cone Corporation v. Hillsborough County*,⁹ the Eleventh Circuit Court of Appeals considered a study in support of Florida's Hillsborough County MBE program, which used minority contractors located in the County as the measure of available firms. The program was found to be constitutional under the compelling governmental interest element of the strict scrutiny standard.

Hillsborough County's program was based on statistics indicating that specific discrimination existed in the construction contracts awarded by the County, not in the construction industry in general. Hillsborough County had extracted data from within its own jurisdictional boundaries and assessed the percentage of minority businesses available in Hillsborough County. The court stated that the study was properly conducted within the "local construction industry."¹⁰

⁴ *Adarand*, which extended *Croson*'s strict scrutiny standard to federal programs, did not change *Croson*'s approach to market area where federal funds are involved.

⁵ *Croson*, 488 U.S. at 471 (1989).

⁶ *Id.* at 500.

⁷ *Id.* at 470.

⁸ See e.g., *Concrete Works of Colorado v. City of Denver, Colorado*, 36 F.3d 1513, 1528 (10th Cir. 1994).

⁹ *Cone Corporation v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990).

¹⁰ *Id.* at 915.



Similarly, in *Associated General Contractors v. Coalition for Economic Equity (AGCCII)*,¹¹ the Ninth Circuit Court of Appeals found the City and County of San Francisco’s MBE program to have the factual predicate necessary to survive strict scrutiny. The San Francisco MBE program was supported by a study that assessed the number of available MBE contractors within the City and County of San Francisco. The court found it appropriate to use the City and County as the relevant market area within which to conduct a disparity study.¹²

In *Coral Construction v. King County*, the Ninth Circuit Court of Appeals held that “a set-aside program is valid only if actual, identifiable discrimination has occurred within the local industry affected by the program.”¹³ In support of its MBE program, the State of Washington’s King County offered studies compiled by other jurisdictions, including entities completely within the County or coterminous with the boundaries of the County, as well as a separate jurisdiction completely outside of the County. The plaintiffs contended that *Croson* required King County to compile its own data and cited *Croson* as prohibiting data sharing.

The court found that data sharing could potentially lead to the improper use of societal discrimination data as the factual basis for a local MBE program and that innocent third parties could be unnecessarily burdened if an MBE program were based on outside data. However, the court also found that the data from entities within the County and from coterminous jurisdictions was relevant to discrimination in the County. They also found that the data posed no risk of unfairly burdening innocent third parties.

Concerning data gathered by a neighboring county, the court concluded that this data could not be used to support King County’s MBE program. The court noted, “It is vital that a race-conscious program align itself as closely to the scope of the problem legitimately sought to be rectified by the governmental entity. To prevent overbreadth, the enacting jurisdiction should limit its factual inquiry to the presence of discrimination within its own boundaries.”¹⁴ However, the court did note that the “world of contracting does not conform itself neatly to jurisdictional boundaries.”¹⁵

There are other situations where courts have approved a definition of market area that extends beyond a jurisdiction’s geographic boundaries. In *Concrete Works v. City and*

¹¹ *Associated General Contractors of California v. Coalition for Economic Equity and City and County of San Francisco*, 950 F.2d 1401 (9th Cir. 1991).

¹² *Id.* at 1415.

¹³ *Coral Construction Co. v. King County*, 941 F.2d 910 (9th Cir. 1991), *cert. denied*, 112 S.Ct. 875 (1992).

¹⁴ *Id.* at 917.

¹⁵ *Id.*



County of Denver,¹⁶ the Tenth Circuit Court of Appeals directly addressed the issue of whether extra-jurisdictional evidence of discrimination can be used to determine “local market area” for a disparity study. In *Concrete Works*, the defendant relied on evidence of discrimination in the six-county Denver Metropolitan Statistical Area (MSA) to support its MBE program. Plaintiffs argued that the federal constitution prohibited consideration of evidence beyond jurisdictional boundaries. The Court of Appeals disagreed.

Critical to the court’s acceptance of the Denver MSA as the relevant local market, was the finding that more than 80 percent of construction and design contracts awarded by Denver were awarded to contractors within the MSA. Another consideration was that Denver’s analysis was based on U.S. Census data, which was available for the Denver MSA but not for the city itself. There was no undue burden placed on nonculpable parties, as Denver had conducted a majority of its construction contracts within the area defined as the local market. Citing *AGCCII*,¹⁷ the court noted, “that any plan that extends race-conscious remedies beyond territorial boundaries must be based on very specific findings that actions that the city has taken in the past have visited racial discrimination on such individuals.”¹⁸

Similarly, New York State conducted a disparity study in which the geographic market consisted of New York State and eight counties in northern New Jersey. The geographic market was defined as the area encompassing the location of businesses which received more than 90 percent of the dollar value of all contracts awarded by the agency.¹⁹

State and local governments must pay special attention to the geographical scope of their disparity studies. *Croson* determined that the statistical analysis should focus on the number of qualified minority individuals or qualified minority business owners in the government’s marketplace.²⁰ The text of *Croson* itself suggests that the geographical boundaries of the government entity comprise an appropriate market area, and other courts have agreed with this finding. In addition, other cases have approved the use of a percentage of the dollars spent by an agency on contracting.

It follows then that an entity may limit consideration of evidence of discrimination to discrimination occurring within its own jurisdiction. Under certain circumstances, extra-jurisdictional evidence can be used if the percentage of governmental dollars supports such boundaries. Taken collectively, the cases support a definition of market area that is reasonable rather than dictating a specific or unreasonably rigid formula. In other words,

¹⁶ *Concrete Works*, 36 F.3d 1513, 1528 (10th Cir. 1994).

¹⁷ *AGCCII*, 950 F.2d 1401 (9th Cir. 1991).

¹⁸ *Concrete Works*, 36 F.3d at 1528 (10th Cir. 1994).

¹⁹ *Opportunity Denied! New York State’s Study*, 26 *Urban Lawyer* No. 3, Summer 1994.

²⁰ *Croson*, 488 U.S. at 501 (1989).



since *Croson* and its progeny did not provide a bright line rule for local market area, that determination should be fact-based and case-specific.

II. MARKET AREA ANALYSIS

Although *Croson* and its progeny do not provide a bright line rule for the delineation of the local market area, taken collectively, the case law supports a definition of market area as within the jurisdiction's own boundaries. It is within the market area where an entity may limit consideration of evidence of discrimination. A review of the contracts awarded by the City of Arlington (City) shows that most of its 3,898 contract awards and the majority of the contract dollars were awarded to Dallas County and Tarrant County businesses. Additionally, the distribution of contracts and dollars awarded within each of the four industries shows a pattern of contracting with businesses from Dallas and Tarrant counties. A review of the contracts and dollars awarded to businesses in these two counties is depicted below:

1. Distribution of All Contracts

The City awarded 3,898 contracts and \$225,039,584 during the October 1, 2002 to September 30, 2007 study period. 82.04 percent of these contracts and 77.95 percent, of the dollars were awarded to Dallas County and Tarrant County-based firms. The distribution of the contracts and dollars awarded is depicted in Table 4.01.

Table 4.01 Distribution of All Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Tarrant	2,076	53.26%	\$114,358,104.19	50.82%
Dallas	1,121	28.76%	\$61,051,282.62	27.13%
Unknown	221	5.67%	\$9,095,463.26	4.04%
Collin	18	0.46%	\$7,154,569.88	3.18%
Out of State - NC	5	0.13%	\$6,738,248.15	2.99%
Remaining*	457	11.72%	\$26,641,916.39	11.84%
Total	3,898	100.00%	\$225,039,584.49	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



2. Distribution of Construction Contracts

The City awarded 614 construction contracts valued at \$132,789,337 during the study period. 87.3 percent of the construction contracts and 85.71 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts and dollars awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.02.

**Table 4.02 Distribution of Construction Contracts Awarded
October 1, 2002 to September 30, 2007**

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Tarrant	423	68.89%	\$83,322,793.61	62.75%
Dallas	113	18.40%	\$30,487,796.41	22.96%
Johnson	10	1.63%	\$5,603,732.55	4.22%
Out of State - KS	4	0.65%	\$2,963,623.55	2.23%
Denton	4	0.65%	\$2,175,526.84	1.64%
Remaining*	60	9.77%	\$8,235,864.40	6.20%
Total	614	100.00%	\$132,789,337.36	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



3. Distribution of Architecture and Engineering Contracts

The City awarded 152 architecture and engineering contracts valued at \$28,033,034 during the October 1, 2002 to September 30, 2007 study period. 74.34 percent of the architecture and engineering contracts and 72.63 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts and dollars awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.03.

Table 4.03 Distribution of Architecture and Engineering Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Tarrant	66	43.42%	\$10,311,921.14	36.78%
Dallas	47	30.92%	\$10,047,636.80	35.84%
Collin	4	2.63%	\$3,517,676.51	12.55%
Remaining*	35	23.03%	\$4,155,799.60	14.82%
Total	152	100.00%	\$28,033,034.05	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



4. Distribution of Professional Services Contracts

The City awarded 139 professional services contracts valued at \$9,239,218 during the October 1, 2002 to September 30, 2007 study period. 48.2 percent of the professional services contracts and 47.3 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.04.

**Table 4.04 Distribution of Professional Services Contracts
Awarded October 1, 2002 to September 30, 2007**

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	45	32.37%	\$2,857,934.53	30.93%
Travis	2	1.44%	\$2,391,408.27	25.88%
Tarrant	21	15.11%	\$1,503,257.79	16.27%
Remaining*	71	51.08%	\$2,486,617.74	26.91%
Total	139	100.00%	\$9,239,218.33	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



5. Distribution of Non-Professional Services Contracts

The City awarded 2,993 non-professional services contracts valued at \$54,977,995 dollars during the October 1, 2002 to September 30, 2007 study period. 82.93 percent of the non-professional services contracts and 67.08 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.05.

Table 4.05 Distribution of Non-Professional Services Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Tarrant	1,566	52.32%	\$19,220,131.65	34.96%
Dallas	916	30.60%	\$17,657,914.88	32.12%
Out of State - NC	5	0.17%	\$6,738,248.15	12.26%
Remaining*	506	16.91%	\$11,361,700.07	20.67%
Total	2,993	100.00%	\$54,977,994.75	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.

6. Market Area Determination

More than 82 percent of the City's contracts and 77 percent of dollars were awarded to businesses located in Dallas and Tarrant counties. Given the geographical distribution of the contracts awarded by the City and the requirements set forth in the applicable case law, the study's market area is determined to be Dallas County and Tarrant County.



III. CITY OF ARLINGTON'S MARKET AREA

The following table depicts the overall number of construction, architecture and engineering, professional services, and non-professional services contracts awarded by the City between October 1, 2002 to September 30, 2007.

The City awarded 3,898 construction, architecture and engineering, professional services, and non-professional services contracts valued at \$225,039,584 during the study period of October 1, 2002 to September 30, 2007. A total of 82.04 percent of the contracts and 77.95 percent of the dollars were awarded to businesses in the market area of counties. The analysis of discrimination has been limited to that occurring within this market area.

Table 4.06 depicts the overall number of construction, architecture and engineering, professional services, and non-professional services contracts and the dollar value of those contracts awarded by the City between October 1, 2002 to September 30, 2007. Of the 3,898 contracts awarded by the City during the study period, 3,198 or 82.04 percent were awarded to market area businesses. The dollar value of contracts awarded to market area businesses was \$175,409,387 or 77.95 percent of all contract dollars awarded.

The breakdown of contracts awarded to market area businesses is as follows:

Construction Contracts: 536 or 87.3 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$113,810,590 or 85.71 percent of the total construction dollars.

Architecture and Engineering Contracts: 113 or 74.34 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$20,359,558 or 72.63 percent of the total architecture and engineering dollars.

Professional Services Contracts: 67 or 48.2 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$4,370,270 or 47.3 percent of the total professional services dollars.²¹

Non-Professional Services Contracts: 2,482 or 82.93 percent were awarded to market area businesses. The dollar value of those contracts was \$36,878,047 or 67.08 percent of the total non-professional services dollars.²²

²¹ 16.51 percent of the total professional services dollars were awarded to businesses outside Texas.

²² 21.82 percent of the total non-professional services dollars were awarded to businesses outside Texas.



**Table 4.06 City of Arlington Market Area: October 1, 2002 to
September 30, 2007**

Market Area	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Combined Types of Work				
Market Area	3,198	82.04%	\$175,418,464	77.95%
Outside Market Area	700	17.96%	\$49,621,120	22.05%
Total	3,898	100.00%	\$225,039,584	100.00%
Construction				
Market Area	536	87.30%	\$113,810,590	85.71%
Outside Market Area	78	12.70%	\$18,978,747	14.29%
Total	614	100.00%	\$132,789,337	100.00%
Architecture and Engineering				
Market Area	113	74.34%	\$20,359,558	72.63%
Outside Market Area	39	25.66%	\$7,673,476	27.37%
Total	152	100.00%	\$28,033,034	100.00%
Professional Services				
Market Area	67	48.20%	\$4,370,270	47.30%
Outside Market Area	72	51.80%	\$4,868,948	52.70%
Total	139	100.00%	\$9,239,218	100.00%
Non-Professional Services				
Market Area	2,482	82.93%	\$36,878,047	67.08%
Outside Market Area	511	17.07%	\$18,099,948	32.92%
Total	2,993	100.00%	\$54,977,995	100.00%



5

AVAILABILITY ANALYSIS

I. INTRODUCTION

Availability is defined, according to *Croson*, as the number of businesses in the jurisdiction's market area that are willing and able to provide goods or services.¹ To determine availability, minority and woman-owned business enterprises (M/WBEs) and non-M/WBEs within the jurisdiction's market area that are willing and able to provide the goods and services need to be enumerated. The analysis presented in *Chapter 4: Market Area Analysis* defined Dallas and Tarrant counties as the market area for this Study. This determination was made because most of the utilized businesses are domiciled in these two counties.

When considering sources for determining the number of willing and able M/WBEs and non-M/WBEs, the selection must be based on whether two significant aspects about the population in question can be gauged from the sources. A business' interest in doing business with the jurisdiction, as implied by the term "willing" and its ability or capacity to provide a service or good, as implied by the term "able" must be discerned.

The compiled list of available businesses includes minority, women, and Caucasian male-owned businesses in the areas of construction, architecture and engineering, professional services, and non-professional services. City of Arlington (City) and the Consortium member (the Consortium)² records, government certification records, business association membership listings, and an outreach campaign were used to compile the documents used as sources for available market area businesses. Separate availability lists were compiled for prime contractors and subcontractors within the four industries. The distribution of available businesses by ethnicity and gender and industry are presented in this chapter.

¹ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 509 (1989).

² The Consortium includes the City of Arlington, City of Fort Worth, Fort Worth Independent School District, Fort Worth Transportation Authority, Dallas/Fort Worth International Airport Board, and North Texas Tollway Authority.



II. PRIME CONTRACTOR AVAILABILITY DATA SOURCES

A. Identification of Willing Businesses Within The Market Area

Mason Tillman identified businesses in the two county market area that provided goods and services that the City procures using four sources. The sources included are the Consortium utilized vendors and unsuccessful bidders, government certification lists, business outreach, and business association membership lists. Only businesses that were determined to be willing were added to the availability list. All businesses identified as willing from more than one source were counted only once. The base document in the availability list was the utilized vendors. To this list was added the unsuccessful bidders, businesses identified through government certification lists, and the willing businesses identified from the business association membership lists. The four sources were ranked with the highest rank assigned to the utilized vendors.

The utilized vendors and unsuccessful bidders were secured from the City and the Consortium records. The certified lists were collected from agencies which certify businesses as local, small, minority and woman-owned. The list of M/W/DBEs maintained by the North Central Texas Regional Certification Agency (NCTRCA) was also collected.

Extensive outreach to business associations in Dallas and Tarrant counties was performed to identify additional businesses willing to contract with the City and the Consortium. Written and telephone contact with organizations and local governments was used to collect membership lists. From the combined effort 13,632 unique market area businesses were identified.

An account of the willing businesses derived by source is listed below:

1. City and The Consortium Records

All of the Consortium utilized vendors and unsuccessful bidders were determined to be willing. There were 19,063 utilized and unsuccessful businesses. To the availability list, 6,970 unique utilized vendors and unsuccessful bidders were added.

2. Government Certification Lists

Certification lists from state and government agencies were collected. There were 12,698 certified businesses compiled from six agencies and all were determined to be willing. From these sources 6,495 unique certified businesses were added to the availability list.



3. Identification of Business Association Membership Lists

Mason Tillman identified lists from 27 business organizations located within the market area. Membership lists were obtained from 22 of these organizations. From the 22 business association membership lists, 5,990 businesses were identified. Of the 5,990 businesses, there were 3,411 unique businesses that offered the goods and services the City and the Consortium procures. The unique list was queried and businesses without a telephone number were excluded. There were 3,287 businesses with telephone numbers. These businesses were surveyed to determine their willingness to contract with the City and the Consortium. There were 167 unique businesses added to the availability list.

B. Prime Contractor Sources

Table 5.01 lists the government and business association sources from which the willing businesses were compiled.

Table 5.01 Prime Contractor Availability Data Sources

Source	Type of Information
City and the Consortium Records	
City of Arlington Utilized Vendors	M/WBEs and non-M/WBEs
Dallas/Fort Worth International Airport Board Utilized Vendors	M/WBEs and non-M/WBEs
City of Fort Worth Utilized Vendors	M/WBEs and non-M/WBEs
Fort Worth Independent School District Utilized Vendors	M/WBEs and non-M/WBEs
Fort Worth Transportation Authority Utilized Vendors	M/W/DBEs and non-M/W/DBEs
North Texas Tollway Authority Utilized Vendors	M/WBEs and non-M/WBEs
City of Arlington Bidders List	M/WBEs and non-M/WBEs
Dallas/Fort Worth International Airport Board Bidders List	M/WBEs and non-M/WBEs
City of Fort Worth Bidders List	M/WBEs and non-M/WBEs
Fort Worth Independent School District Bidders List	M/WBEs and non-M/WBEs
Fort Worth Transportation Authority Bidders List	M/W/DBEs and non-M/W/DBEs
North Texas Tollway Authority Bidders List	M/WBEs and non-M/WBEs



Source	Type of Information
Government Certification Lists	
State of Texas Centralized Master Bidders List (CMBL)	M/WBEs and non-M/WBEs
State of Texas Historically Underutilized Business (HUB) Directory	HUBs
Dallas City Hall M/WBE Directory	M/WBEs
North Central Texas Regional Certification Agency (Dallas and Tarrant Counties)	M/W/DBEs and non-M/W/DBEs
Texas Unified Certification Program Disadvantaged Business Enterprise Information Directory, Dallas and Tarrant Counties	DBEs
United States Small Business Administration: Procurement Marketing and Access Network, Dallas and Tarrant Counties	M/WBEs and non-M/WBEs
Business Association Membership/Licensing Board Lists	
American Institute of Architects	M/WBEs and non-M/WBEs
Apartment Association of Tarrant County	M/WBEs and non-M/WBEs
Associated Builders and Contractors	M/WBEs and non-M/WBEs
Black Contractors Associations, Inc. Directory	M/WBEs and non-M/WBEs
Dallas Black Chamber of Commerce	M/WBEs and non-M/WBEs
Dallas/Fort Worth Minority Business Development Council	M/WBEs and non-M/WBEs
Fort Worth Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Greater Dallas Asian American Chamber of Commerce	M/WBEs and non-M/WBEs
Greater Dallas Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Fort Worth Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Hispanic Contractors Association	M/WBEs and non-M/WBEs
Mechanical Contractors Association of Dallas	M/WBEs and non-M/WBEs
Mechanical Contractors Association of Texas	M/WBEs and non-M/WBEs
National Minority Women Business Enterprise Directory, Dallas and Tarrant Counties	M/WBEs
National Association of Women Business Owners	WBEs
National Electrical Contractors Association - North Texas	M/WBEs and non-M/WBEs
Native American Indian Chamber of Commerce	M/WBEs and non-M/WBEs



Source	Type of Information
Northwest Metroport Chamber of Commerce	M/WBEs and non-M/WBEs
Saginaw Area Chamber of Commerce	M/WBEs and non-M/WBEs
Texas Board of Professional Engineers	M/WBEs and non-M/WBEs
White Settlement Area Businesses List	M/WBEs and non-M/WBEs
White Settlement Area Chamber of Commerce	M/WBEs and non-M/WBEs
Women's Business Council - Southwest	WBEs

C. Determination of Willingness

All businesses used in the availability analysis were determined to be willing to contract with the City and the Consortium. Willingness is defined in *Croson* and its progeny as a business' interest in doing government contracting. This term is discussed in detail in *Volume 1 Chapter 1: Legal Analysis* of this Report. Businesses identified from the 41 sources listed in Table 5.01 have demonstrated their willingness to perform on public contracts. To be classified as willing the business either had bid on a City or Consortium contract, secured government certification, responded to the outreach campaign conducted in conjunction with this Study, or was listed on a business organization membership list and affirmed its interest in contracting with the City and the Consortium through the survey. It was presumed that companies that sought government contracts or certification were willing to contract with the City and the Consortium.



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

Tables 5.02 through 5.06 present the distribution of willing prime contractors by the source. The 36 sources listed in Table 5.01 are ranked. The highest ranked source was the prime contractors utilized by the City and the Consortium. Each ranked business is *counted only once*. For example, a utilized prime contractor counted once in the prime contractor utilization source will not be counted a second time as a bidder, as a certified business, or as a company identified during outreach.

As noted in Table 5.02, 87.79 percent of the businesses on the unique list of available prime contractors were obtained from the City and the Consortium records of utilized contractors, unsuccessful bidders, and government certification lists. Companies identified through business outreach and the business association membership lists represent 12.21 percent of the willing businesses.

Table 5.02 Distribution of Prime Contractor Availability Data Sources, All Industries

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	11.12%	58.11%	32.54%
Bidders Lists	18.39%	6.91%	13.16%
Government Certification Lists	57.91%	2.15%	32.50%
SBA Pro-Net	5.99%	13.92%	9.60%
Subtotal	93.41%	81.09%	87.79%
Willingness Survey	6.59%	18.91%	12.21%
Subtotal	6.59%	18.91%	12.21%
Grand Total*	100.00%	100.00%	100.00%

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



A distribution of available businesses by source also was calculated for each industry. As noted in Table 5.03, 76.2 percent of the construction companies identified were derived from the City and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 23.8 percent of the willing businesses.

Table 5.03 Distribution of Prime Contractor Availability Data Sources, Construction

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	11.31%	36.18%	19.65%
Bidders Lists	20.11%	6.12%	15.42%
Government Certification Lists	55.45%	2.49%	37.70%
SBA Pro-Net	2.13%	6.04%	3.44%
Subtotal	88.99%	50.83%	76.20%
Willingness Survey	11.01%	49.17%	23.80%
Subtotal	11.01%	49.17%	23.80%
Grand Total*	100.00%	100.00%	100.00%

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



Table 5.04 depicts the data sources for available architecture and engineering prime contractors. As noted, 71.25 percent of the architecture and engineering companies identified were derived from the City and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 28.75 percent of the willing businesses.

Table 5.04 Distribution of Prime Contractor Availability Data Sources, Architecture and Engineering

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	13.03%	26.97%	19.44%
Bidders Lists	26.67%	10.35%	19.17%
Government Certification Lists	48.76%	1.60%	27.08%
SBA Pro-Net	2.61%	9.04%	5.56%
Subtotal	91.07%	47.96%	71.25%
Willingness Survey	8.93%	52.04%	28.75%
Subtotal	8.93%	52.04%	28.75%
Grand Total*	100.00%	100.00%	100.00%

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



Table 5.05 depicts the data sources for available professional services prime contractors. As noted, 75.69 percent of the construction companies identified were derived from the City and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 24.31 percent of the willing businesses.

Table 5.05 Distribution of Prime Contractor Availability Data Sources, Professional Services

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	7.96%	27.96%	15.55%
Bidders Lists	20.04%	8.19%	15.55%
Government Certification Lists	52.39%	1.89%	33.24%
SBA Pro-Net	6.88%	18.70%	11.36%
Subtotal	87.27%	56.73%	75.69%
Willingness Survey	12.73%	43.27%	24.31%
Subtotal	12.73%	43.27%	24.31%
Grand Total*	100.00%	100.00%	100.00%

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



Table 5.06 depicts the data sources for available non-professional services prime contractors. As noted, 97.84 percent of the non-professional services companies identified were derived from the City and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 2.16 percent of the willing businesses.

Table 5.06 Distribution of Prime Contractor Availability Data Sources, Non-Professional Services

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	18.65%	84.10%	49.02%
Bidders Lists	17.80%	5.17%	11.94%
Government Certification Lists	58.41%	2.15%	32.30%
SBA Pro-Net	3.74%	5.54%	4.57%
Subtotal	98.60%	96.95%	97.84%
Willingness Survey	1.40%	3.05%	2.16%
Subtotal	1.40%	3.05%	2.16%
Grand Total*	100.00%	100.00%	100.00%

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



III. CAPACITY

The second component of the availability requirement set forth in *Croson* is a business's capacity or ability to work on the contracts awarded by the jurisdiction.³ However, capacity requirements are not delineated in *Croson*. In fact, a standard for capacity has only been addressed in a few subsequent cases. Each case where capacity has been considered has involved large, competitively bid construction prime contracts. Nevertheless, the capacity of willing market area businesses to do business with the City was assessed using four approaches.

- The size of all prime contracts awarded by the City was analyzed to determine the capacity needed to perform the average awarded contract
- The largest contracts awarded to M/WBEs were identified to determine demonstrated ability to win large, competitively bid contracts
- The certification process was assessed to determine if it meets the standard set in *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia (Philadelphia)*,⁴ which found the USDOT certification to measure capacity.
- The disparity analysis was restricted to an examination of the prime contract awards valued under \$500,000 to limit the capacity required to perform the contracts subjected to the statistical analysis

A. Size of Contracts Analyzed

In *Associated General Contractors of California v. City of Columbus* and *Engineering Contractors Ass'n of South Florida v. Metropolitan Dade City*, the courts were concerned with the capacity analysis of available businesses to bid on large, competitively bid contracts. It should also be noted that the focus in both cases was on the bidding company's size and ability to perform on large, competitively bid construction contracts.⁵

The City's construction, architecture and engineering, professional services, and non-professional services contracts were analyzed to determine the size of awarded contracts and, therefore, the capacity required to perform on the City's contracts. The size distribution

³ *Croson*, 488 U.S. 469.

⁴ *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990 (3d Cir. 1993), on remand, 893 F. Supp. 419 (E.D. Penn. 1995), aff'd, 91 F.3d 586 (3d Cir. 1996).

⁵ *Associated General Contractors of California v. City of Columbus*, 936 F. Supp. 1363 (S.D. Ohio 1996), and *Engineering Contractors Ass'n of South Florida v. Metropolitan Dade City*, 943 F. Supp. 1546 (S.D. Fla. 1996), aff'd 122 F.3d 895 (11th Cir. 1997).



illustrates the fact that the majority of the City awarded contracts were under \$25,000. This distribution illustrates that limited capacity is needed to perform the overwhelming majority of the City's contracts.

For this contract size analysis, the City's contracts were grouped into eight dollar ranges⁶. Each award was analyzed to determine the number and percentage of contracts that fell within each of the eight size categories. The size distribution of contracts awarded to Caucasian Males, was then compared to the size distribution of contracts awarded to Caucasian Females, Minority Females, and Minority Males.

The analysis in Table 5.07, which combines all industries, demonstrates that 87.79 percent of the City's contracts were less than \$25,000, 93.77 percent were less than \$100,000, and 97.89 percent were less than \$500,000. Only 2.11 percent of the City's contracts were \$500,000 or more.

1. Construction Contracts by Size

Table 5.08 depicts the City's construction contracts awarded within the eight dollar ranges. Contracts valued at less than \$25,000 were 76.45 percent; those less than \$50,000 were 80.27 percent; those less than \$100,000 were 83.75 percent; and those less than \$500,000 were 91.38 percent.

2. Architecture and Engineering Contracts by Size

Table 5.09 depicts architecture and engineering contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 53.95 percent; those less than \$50,000 were 61.84 percent; those less than \$100,000 were 76.97 percent; and those less than \$500,000 were 95.39 percent.

3. Professional Services Contracts by Size

Table 5.10 depicts professional services contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 64.75 percent; those less than \$50,000 were 72.66 percent; those less than \$100,000 were 82.01 percent; and those less than \$500,000 were 97.12 percent.

4. Non-Professional Services Contracts by Size

Table 5.11 depicts non-professional services contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 92.78 percent; those less than \$50,000 were

⁶ The eight dollar ranges are \$1 to \$24,999, \$25,000 to \$49,999, \$50,000 to \$99,999, \$100,000 to \$249,999, \$250,000 to \$499,999, \$500,000 to \$999,999, \$1,000,000 to \$2,999,999, and \$3,000,000 and greater.



94.95 percent; those less than \$100,000 were 97.09 percent; and those less than \$500,000 were 99.26 percent.



Table 5.07 Contracts by Size: All Industries, October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	337	91.08%	2,847	87.92%	115	85.82%	110	78.01%	3,409	87.79%
\$25,000 - \$49,999	7	1.89%	90	2.78%	4	2.99%	10	7.09%	111	2.86%
\$50,000 - \$99,999	7	1.89%	102	3.15%	4	2.99%	8	5.67%	121	3.12%
\$100,000 - \$249,999	5	1.35%	82	2.53%	7	5.22%	8	5.67%	102	2.63%
\$250,000 - \$499,999	3	0.81%	48	1.48%	2	1.49%	5	3.55%	58	1.49%
\$500,000 - \$999,999	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
\$1,000,000 - \$2,999,999	6	1.62%	36	1.11%	1	0.75%	0	0.00%	43	1.11%
\$3,000,000 and greater	5	1.35%	33	1.02%	1	0.75%	0	0.00%	39	1.00%
Total	370	100.00%	3238	100.00%	134	100.00%	141	100.00%	3883	100.00%

P-Value < 0.01

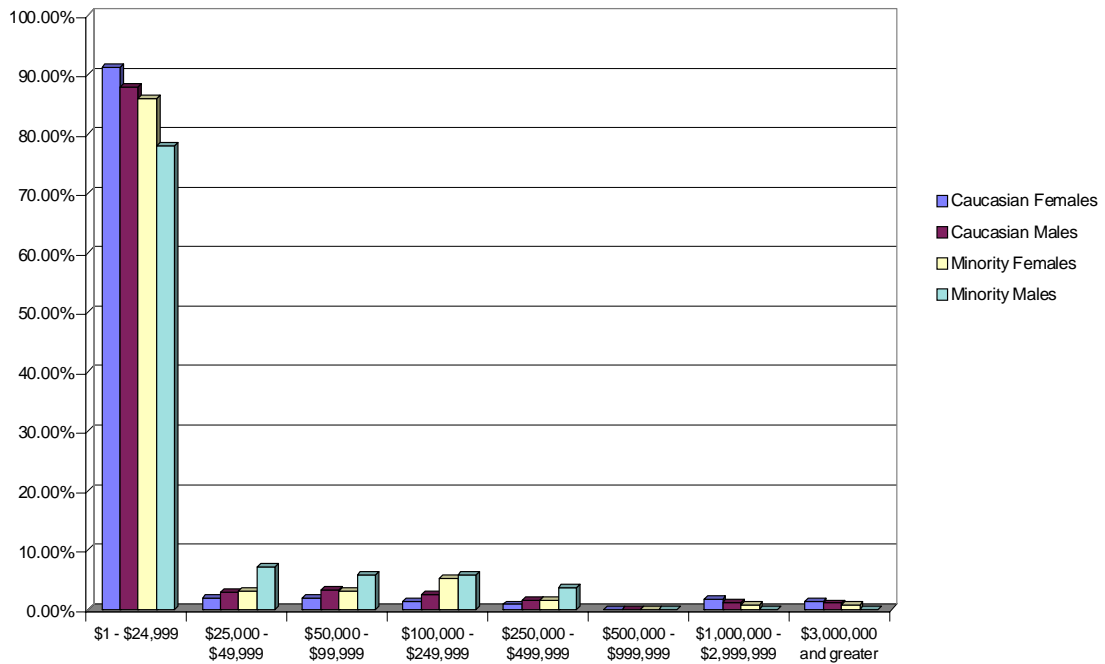
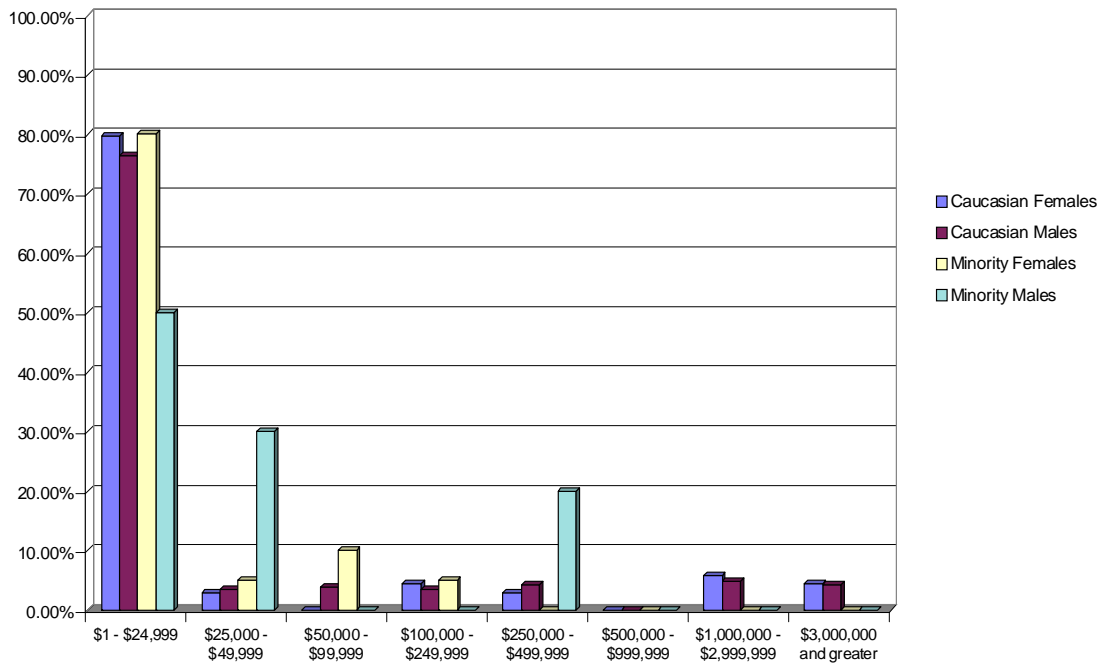


Table 5.08 Construction Contracts by Size: October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	55	79.71%	385	76.39%	16	80.00%	5	50.00%	461	76.45%
\$25,000 - \$49,999	2	2.90%	17	3.37%	1	5.00%	3	30.00%	23	3.81%
\$50,000 - \$99,999	0	0.00%	19	3.77%	2	10.00%	0	0.00%	21	3.48%
\$100,000 - \$249,999	3	4.35%	17	3.37%	1	5.00%	0	0.00%	21	3.48%
\$250,000 - \$499,999	2	2.90%	21	4.17%	0	0.00%	2	20.00%	25	4.15%
\$500,000 - \$999,999	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
\$1,000,000 - \$2,999,999	4	5.80%	24	4.76%	0	0.00%	0	0.00%	28	4.64%
\$3,000,000 and greater	3	4.35%	21	4.17%	0	0.00%	0	0.00%	24	3.98%
Total	69	100.00%	504	100.00%	20	100.00%	10	100.00%	603	100.00%

P-Value > 0.05



**Table 5.09 Architecture and Engineering Contracts by Size:
October 1, 2002 to September 30, 2007**

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males		Total	
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	13	76.47%	68	53.97%	0	0.00%	1	12.50%	82	53.95%
\$25,000 - \$49,999	0	0.00%	11	8.73%	0	0.00%	1	12.50%	12	7.89%
\$50,000 - \$99,999	3	17.65%	18	14.29%	0	0.00%	2	25.00%	23	15.13%
\$100,000 - \$249,999	0	0.00%	14	11.11%	0	0.00%	3	37.50%	17	11.18%
\$250,000 - \$499,999	1	5.88%	9	7.14%	0	0.00%	1	12.50%	11	7.24%
\$500,000 - \$999,999	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
\$1,000,000 - \$2,999,999	0	0.00%	3	2.38%	1	100.00%	0	0.00%	4	2.63%
\$3,000,000 and greater	0	0.00%	3	2.38%	0	0.00%	0	0.00%	3	1.97%
Total	17	100.00%	126	100.00%	1	100.00%	8	100.00%	152	100.00%

Insufficient Data

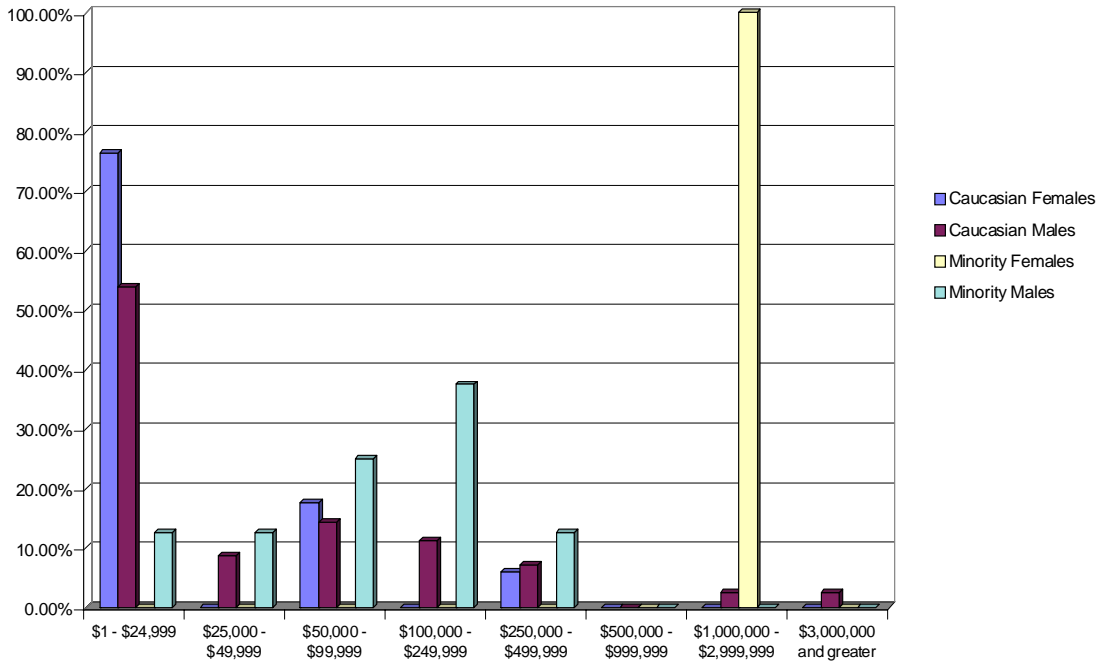
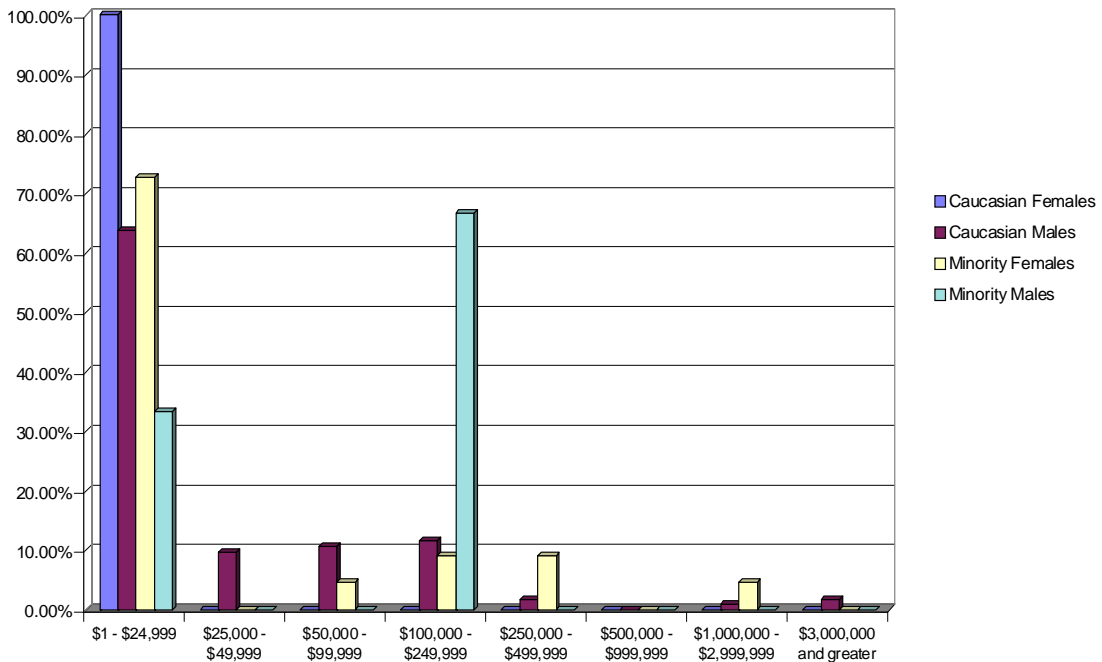


Table 5.10 Professional Services Contracts by Size: October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males		Freq	Percent
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent		
\$1 - \$24,999	1	100.00%	72	63.72%	16	72.73%	1	33.33%	90	64.75%
\$25,000 - \$49,999	0	0.00%	11	9.73%	0	0.00%	0	0.00%	11	7.91%
\$50,000 - \$99,999	0	0.00%	12	10.62%	1	4.55%	0	0.00%	13	9.35%
\$100,000 - \$249,999	0	0.00%	13	11.50%	2	9.09%	2	66.67%	17	12.23%
\$250,000 - \$499,999	0	0.00%	2	1.77%	2	9.09%	0	0.00%	4	2.88%
\$500,000 - \$999,999	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
\$1,000,000 - \$2,999,999	0	0.00%	1	0.88%	1	4.55%	0	0.00%	2	1.44%
\$3,000,000 and greater	0	0.00%	2	1.77%	0	0.00%	0	0.00%	2	1.44%
Total	1	100.00%	113	100.00%	22	100.00%	3	100.00%	139	100.00%

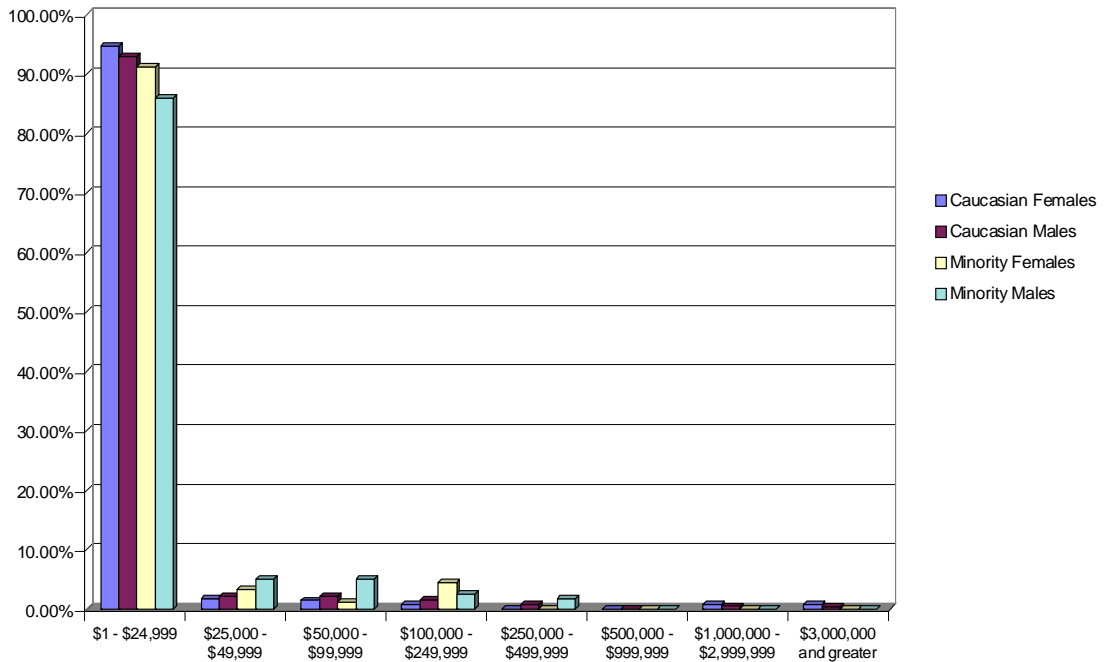
Insufficient Data



**Table 5.11 Non-Professional Services Contracts by Size:
October 1, 2002 to September 30, 2007**

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	268	94.70%	2,322	92.95%	83	91.21%	103	85.83%	2,776	92.78%
\$25,000 - \$49,999	5	1.77%	51	2.04%	3	3.30%	6	5.00%	65	2.17%
\$50,000 - \$99,999	4	1.41%	53	2.12%	1	1.10%	6	5.00%	64	2.14%
\$100,000 - \$249,999	2	0.71%	38	1.52%	4	4.40%	3	2.50%	47	1.57%
\$250,000 - \$499,999	0	0.00%	16	0.64%	0	0.00%	2	1.67%	18	0.60%
\$500,000 - \$999,999	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
\$1,000,000 - \$2,999,999	2	0.71%	11	0.44%	0	0.00%	0	0.00%	13	0.43%
\$3,000,000 and greater	2	0.71%	7	0.28%	0	0.00%	0	0.00%	9	0.30%
Total	283	100.00%	2498	100.00%	91	100.00%	120	100.00%	2992	100.00%

P-Value < 0.05



B. Largest M/WBE Contract Awards by The Consortium, by Industry

M/WBEs were awarded large contracts in each industry. The distribution of the largest M/WBE contracts the City awarded is depicted below in Table 5.12. In each industry, M/WBEs were awarded very large, competitively bid contracts. The utilization analysis shows that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$2 million in construction, \$1.3 million in architecture and engineering, \$500,000 in professional services, and \$2 million in non-professional services.

Table 5.12 Largest M/WBE Contract Awards - The City of Arlington

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$339,330	\$1,295,933	\$500,000	\$376,490
WBEs	\$1,990,682	\$494,000	\$339	\$1,996,475

M/WBEs also demonstrated the capacity to successfully compete for contracts awarded by the Consortium. The City of Fort Worth’s utilization analysis shows in Table 5.13 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$5.1 million in construction, \$582,000 in architecture and engineering, \$300,000 in professional services, and \$1.3 million in non-professional services.

Table 5.13 Largest M/WBE Contract Awards - The City of Fort Worth

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$5,109,844	\$582,429	\$300,000	\$1,346,043
WBEs	\$2,078,644	\$277,193	\$272,998	\$553,793



The Fort Worth Independent School District’s utilization analysis shows in Table 5.14 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$13.4 million in construction, \$453,000 in architecture and engineering, \$34,000 in professional services, and \$654,000 in non-professional services.

Table 5.14 Largest M/WBE Contract Awards - Fort Worth Independent School District

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$13,420,819	\$453,067	\$32,844	\$654,267
WBEs	\$2,576,447	\$41,758	\$34,244	\$474,150

Fort Worth Transportation Authority’s utilization analysis shows in Table 5.15 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$25,000 in construction, \$4,000 in architecture and engineering, \$98,000 in professional services, and \$500,000 in non-professional services.

Table 5.15 Largest M/WBE Contract Awards - Fort Worth Transportation Authority

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$9,880	\$4,391	\$46,100	\$500,000
WBEs	\$24,949	\$0	\$98,232	\$195,968



Dallas/Fort Worth International Airport Board’s utilization analysis shows in Table 5.16 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$12 million in construction, \$11 million in architecture and engineering, \$1 million in professional services, \$14 million in non-professional services.

Table 5.16 Largest M/WBE Contract Awards - Dallas/Fort Worth International Airport Board

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$12,000,000	\$10,756,159	\$533,000	\$14,063,193
WBEs	\$12,000,000	\$2,500,000	\$1,000,000	\$4,523,467

The North Texas Tollway Authority’s utilization analysis shows in Table 5.17 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$5 million in construction, \$1.9 million in architecture and engineering, \$110,000 in professional services, and \$125,000 in non-professional services.

Table 5.17 Largest M/WBE Contract Awards - North Texas Tollway Authority

Largest Contract Value				
Ethnic Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$483,842	\$1,855,312	\$110,150	\$32,812
WBEs	\$5,094,978	\$1,487,526	\$37,750	\$125,225



C. City and The Consortium Certification Standards

The Court has addressed the merits of certification as a measure of capacity.⁷ *Philadelphia*, an appellate court decision, found that a certification program which was based on USDOT standards satisfied the determination of a business's capability. Thus, a certification program like NCTRCA which adheres to the standards set forth in the USDOT regulations, 49 Code of Federal Regulations Part 26, is documentation of M/WBE capacity.

IV. PRIME CONTRACTOR AVAILABILITY ANALYSIS

The size of the City's contracts demonstrates that the majority of the contracts are small requiring limited capacity to perform. Furthermore, the awards the City has made to M/WBE businesses demonstrate that the capacity of the available businesses is considerably greater than needed to bid on the majority of the contracts awarded in the four industries studied.

The prime contractor availability findings for the Dallas and Tarrant counties market area, are summarized below:



⁷

Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia, 6 F.3d 990 (3d Cir. 1993), on remand, 893 F. Supp. 419 (E.D. Penn. 1995), aff'd, 91 F.3d 586 (3d Cir. 1996).

A. Construction Prime Contractor Availability

The distribution of available construction prime contractors is summarized in Table 5.18 below. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African Americans account for 21.7 percent of the construction businesses in the City's market area.

Asian Americans account for 3.62 percent of the construction businesses in the City's market area.

Hispanic Americans account for 19.9 percent of the construction businesses in the City's market area.

Native Americans account for 2.3 percent of the construction businesses in the City's market area.

Minority Business Enterprises account for 47.52 percent of the construction businesses in the City's market area.

Women Business Enterprises account for 18.96 percent of the construction businesses in the City's market area.

Minority and Women Business Enterprises account for 66.48 percent of the construction businesses in the City's market area.

Caucasian Male Business Enterprises account for 33.52 percent of the construction businesses in the City's market area.



Table 5.18 Available Construction Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	21.70%
Asian Americans	3.62%
Hispanic Americans	19.90%
Native Americans	2.30%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	4.43%
African American Males	17.27%
Asian American Females	0.84%
Asian American Males	2.78%
Hispanic American Females	3.57%
Hispanic American Males	16.33%
Native American Females	0.78%
Native American Males	1.52%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	9.62%
Minority Males	37.90%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	47.52%
Women Business Enterprises	18.96%
Minority and Women Business Enterprises	66.48%
Caucasian Male Business Enterprises	33.52%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



B. Architecture and Engineering Services Prime Contractor Availability

The distribution of available architecture and engineering prime contractors is summarized in Table 5.19 below:

African Americans account for 14.28 percent of the architecture and engineering businesses in the City's market area.

Asian Americans account for 8.18 percent of the architecture and engineering businesses in the City's market area.

Hispanic Americans account for 11.86 percent of the architecture and engineering businesses in the City's market area.

Native Americans account for 1.41 percent of the architecture and engineering businesses in the City's market area.

Minority Business Enterprises account for 35.72 percent of the architecture and engineering businesses in the City's market area.

Women Business Enterprises account for 18.3 percent of the architecture and engineering businesses in the City's market area.

Minority and Women Business Enterprises account for 54.02 percent of the architecture and engineering businesses in the City's market area.

Caucasian Male Business Enterprises account for 45.98 percent of the architecture and engineering businesses in the City's market area.



Table 5.19 Available Architecture and Engineering Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	14.28%
Asian Americans	8.18%
Hispanic Americans	11.86%
Native Americans	1.41%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	2.82%
African American Males	11.46%
Asian American Females	1.61%
Asian American Males	6.57%
Hispanic American Females	2.28%
Hispanic American Males	9.58%
Native American Females	0.40%
Native American Males	1.01%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	7.10%
Minority Males	28.62%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	35.72%
Women Business Enterprises	18.30%
Minority and Women Business Enterprises	54.02%
Caucasian Male Business Enterprises	45.98%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



C. Professional Services Prime Contractor Availability

The distribution of available professional services prime contractors is summarized in Table 5.20 below:

African Americans account for 20.59 percent of the professional services businesses in the City's market area.

Asian Americans account for 6.31 percent of the professional services businesses in the City's market area.

Hispanic Americans account for 8.87 percent of the professional services businesses in the City's market area.

Native Americans account for 1.02 percent of the professional services businesses in the City's market area.

Minority Business Enterprises account for 36.79 percent of the professional services businesses in the City's market area.

Women Business Enterprises account for 25.29 percent of the professional services businesses in the City's market area.

Minority and Women Business Enterprises account for 62.08 percent of the professional services businesses in the City's market area.

Caucasian Male Business Enterprises account for 37.92 percent of the professional services businesses in the City's market area.



Table 5.20 Available Professional Services Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	20.59%
Asian Americans	6.31%
Hispanic Americans	8.87%
Native Americans	1.02%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	9.38%
African American Males	11.22%
Asian American Females	2.02%
Asian American Males	4.29%
Hispanic American Females	3.06%
Hispanic American Males	5.80%
Native American Females	0.41%
Native American Males	0.61%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	14.87%
Minority Males	21.92%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	36.79%
Women Business Enterprises	25.29%
Minority and Women Business Enterprises	62.08%
Caucasian Male Business Enterprises	37.92%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Non-Professional Services Prime Contractor Availability

The distribution of available non-professional services prime contractors is summarized in Table 5.21 below:

African Americans account for 19.71 percent of the non-professional services businesses in the City's market area.

Asian Americans account for 3.31 percent of the non-professional services businesses in the City's market area.

Hispanic Americans account for 9.57 percent of the non-professional services businesses in the City's market area.

Native Americans account for 0.87 percent of the non-professional services businesses in the City's market area.

Minority Business Enterprises account for 33.46 percent of the non-professional services businesses in the City's market area.

Women Business Enterprises account for 20.14 percent of the non-professional services businesses in the City's market area.

Minority and Women Business Enterprises account for 53.6 percent of the non-professional services businesses in the City's market area.

Caucasian Male Business Enterprises account for 46.4 percent of the non-professional services businesses in the City's market area.



Table 5.21 Available Non-Professional Services Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	19.71%
Asian Americans	3.31%
Hispanic Americans	9.57%
Native Americans	0.87%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	6.85%
African American Males	12.86%
Asian American Females	1.07%
Asian American Males	2.24%
Hispanic American Females	2.93%
Hispanic American Males	6.64%
Native American Females	0.39%
Native American Males	0.48%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	11.24%
Minority Males	22.22%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	33.46%
Women Business Enterprises	20.14%
Minority and Women Business Enterprises	53.60%
Caucasian Male Business Enterprises	46.40%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



V. SUBCONTRACTOR AVAILABILITY ANALYSIS

A. Sources of Potentially Willing and Able Subcontractors and Availability

All available prime contractors were included in the calculation of subcontractor availability. Additional subcontractors in the City's market area were identified using sources in Table 5.22.

Table 5.22 Unique Subcontractor Availability Data Sources

Type Record	Type Information
<ul style="list-style-type: none">• Subcontracting records provided by the City and the Consortium	<ul style="list-style-type: none">• M/WBEs and non-M/WBEs
<ul style="list-style-type: none">• Prime contractor survey which identified subcontractors utilized by the City and the Consortium	<ul style="list-style-type: none">• M/WBEs and non-M/WBEs

B. Determination of Willingness and Capacity

Subcontractor availability was limited to businesses determined to be willing and able to perform as prime contractors and businesses utilized as subcontractors; therefore, the determination of willingness was achieved. *Croson* does not require a measure of subcontractor capacity; therefore, it is not necessary to address capacity issues in the context of subcontractors.



C. Horizontal Construction Subcontractor Availability

The distribution of available horizontal construction subcontractors is summarized in Table 5.23.

African Americans account for 24.17 percent of the horizontal construction firms in the City's market area.

Asian Americans account for 3.58 percent of the horizontal construction firms in the City's market area.

Hispanic Americans account for 20.78 percent of the horizontal construction firms in the City's market area.

Native Americans account for 2.11 percent of the horizontal construction firms in the City's market area.

Minority Business Enterprises account for 50.64 percent of the horizontal construction firms in the City's market area.

Women Business Enterprises account for 16.37 percent of the horizontal construction firms in the City's market area.

Minority and Women Business Enterprises account for 67.01 percent of the horizontal construction firms in the City's market area.

Caucasian Male Business Enterprises account for 32.99 percent of the horizontal construction firms in the City's market area.



Table 5.23 Available Horizontal Construction Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	24.17%
Asian Americans	3.58%
Hispanic Americans	20.78%
Native Americans	2.11%
Caucasian Females	16.37%
Caucasian Males	32.99%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	5.24%
African American Males	18.93%
Asian American Females	0.83%
Asian American Males	2.75%
Hispanic American Females	2.94%
Hispanic American Males	17.84%
Native American Females	0.77%
Native American Males	1.34%
Caucasian Females	16.37%
Caucasian Males	32.99%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	9.78%
Minority Males	40.86%
Caucasian Females	16.37%
Caucasian Males	32.99%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	50.64%
Women Business Enterprises	16.37%
Minority and Women Business Enterprises	67.01%
Caucasian Male Business Enterprises	32.99%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Vertical Construction Subcontractor Availability

The distribution of available vertical construction subcontractors is summarized in Table 5.24.

African Americans account for 21.84 percent of the vertical construction firms in the City's market area.

Asian Americans account for 3.69 percent of the vertical construction firms in the City's market area.

Hispanic Americans account for 19.57 percent of the vertical construction firms in the City's market area.

Native Americans account for 2.47 percent of the vertical construction firms in the City's market area.

Minority Business Enterprises account for 47.57 percent of the vertical construction firms in the City's market area.

Women Business Enterprises account for 18.81 percent of the vertical construction firms in the City's market area.

Minority and Women Business Enterprises account for 66.38 percent of the vertical construction firms in the City's market area.

Caucasian Male Business Enterprises account for 33.62 percent of the vertical construction firms in the City's market area.



Table 5.24 Available Vertical Construction Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	21.84%
Asian Americans	3.69%
Hispanic Americans	19.57%
Native Americans	2.47%
Caucasian Females	18.81%
Caucasian Males	33.62%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	4.43%
African American Males	17.42%
Asian American Females	0.79%
Asian American Males	2.89%
Hispanic American Females	3.69%
Hispanic American Males	15.89%
Native American Females	0.82%
Native American Males	1.65%
Caucasian Females	18.81%
Caucasian Males	33.62%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	9.73%
Minority Males	37.84%
Caucasian Females	18.81%
Caucasian Males	33.62%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	47.57%
Women Business Enterprises	18.81%
Minority and Women Business Enterprises	66.38%
Caucasian Male Business Enterprises	33.62%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



E. Architecture and Engineering Subcontractor Availability

The distribution of available architecture and engineering subcontractors is summarized in Table 5.25.

African Americans account for 13.43 percent of the architecture and engineering firms in the City's market area.

Asian Americans account for 7.38 percent of the architecture and engineering firms in the City's market area.

Hispanic Americans account for 11.41 percent of the architecture and engineering firms in the City's market area.

Native Americans account for 1.61 percent of the architecture and engineering firms in the City's market area.

Minority Business Enterprises account for 33.83 percent of the architecture and engineering firms in the City's market area.

Women Business Enterprises account for 20.23 percent of the architecture and engineering in the City's market area.

Minority and Women Business Enterprises account for 54.06 percent of the architecture and engineering firms in the City's market area.

Caucasian Male Business Enterprises account for 45.94 percent of the architecture and engineering firms in the City's market area.



Table 5.25 Available Architecture and Engineering Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	13.43%
Asian Americans	7.38%
Hispanic Americans	11.41%
Native Americans	1.61%
Caucasian Females	20.23%
Caucasian Males	45.94%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	2.65%
African American Males	10.78%
Asian American Females	1.67%
Asian American Males	5.71%
Hispanic American Females	2.25%
Hispanic American Males	9.16%
Native American Females	0.58%
Native American Males	1.04%
Caucasian Females	20.23%
Caucasian Males	45.94%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	7.15%
Minority Males	26.69%
Caucasian Females	20.23%
Caucasian Males	45.94%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	33.83%
Women Business Enterprises	20.23%
Minority and Women Business Enterprises	54.06%
Caucasian Male Business Enterprises	45.94%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



F. Professional Services Subcontractor Availability

The distribution of available professional services subcontractors is summarized in Table 5.26.

African Americans account for 20.4 percent of the professional services firms in the City's market area.

Asian Americans account for 6.14 percent of the professional services firms in the City's market area.

Hispanic Americans account for 9.15 percent of the professional services firms in the City's market area.

Native Americans account for 1.28 percent of the professional services firms in the City's market area.

Minority Business Enterprises account for 36.96 percent of the professional services firms in the City's market area.

Women Business Enterprises account for 25.7 percent of the professional services in the City's market area.

Minority and Women Business Enterprises account for 62.66 percent of the professional services firms in the City's market area.

Caucasian Male Business Enterprises account for 37.34 percent of the professional services firms in the City's market area.



Table 5.26 Available Professional Services Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	20.40%
Asian Americans	6.14%
Hispanic Americans	9.15%
Native Americans	1.28%
Caucasian Females	25.70%
Caucasian Males	37.34%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	9.24%
African American Males	11.16%
Asian American Females	1.89%
Asian American Males	4.24%
Hispanic American Females	3.07%
Hispanic American Males	6.08%
Native American Females	0.52%
Native American Males	0.76%
Caucasian Females	25.70%
Caucasian Males	37.34%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	14.72%
Minority Males	22.24%
Caucasian Females	25.70%
Caucasian Males	37.34%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	36.96%
Women Business Enterprises	25.70%
Minority and Women Business Enterprises	62.66%
Caucasian Male Business Enterprises	37.34%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



6

PRIME CONTRACTOR DISPARITY ANALYSIS

I. INTRODUCTION

The objective of the disparity analysis is to determine the level minority and woman-owned business enterprises (M/WBEs) were utilized on the City of Arlington (City) contracts. Minority business enterprises are analyzed according to ethnic group. Under a fair and equitable system of awarding contracts, the proportion of contract dollars awarded to M/WBEs would be approximate to the proportion of available M/WBEs¹ in the relevant market area. A statistical test is conducted to determine if the available M/WBE businesses are underutilized due to random chance or something else.² According to *Croson*, if the statistical test is significant, then prima facie an inference of discrimination can be made.

The first step in conducting a statistical test of disparity is to calculate the contract value that each ethnic and gender group is expected to receive, based on each group's availability in the market area. This value shall be referred to as the **expected contract amount**. The next step is to compute the difference between the expected contract amount of each ethnic and gender group and the **actual contract amount** received by each group.

A disparity ratio of less than 0.80 indicates a relevant degree of disparity. This disparity may be detected using a parametric analysis,³ where the number of contracts is sufficiently large and the variation of the contract amount is not too large. When the standard deviation in the contract dollar amounts is high, which generally is the result of a few very large contracts, a disparity may not be detectable. Under the condition when the variation in contract dollar

¹ Availability is defined as the number of willing and able firms. The methodology for determining willing and able firms is detailed in *Chapter 5: Availability Analysis*.

² The study does not test statistically the overutilization of M/WBEs or the utilization of Caucasian Males.

³ Parametric analysis is a statistical examination based on the actual values of the variable. In this case, the parametric analysis consists of the actual dollar values of the contracts.



amounts is high, a non-parametric analysis⁴ would be employed to analyze the contracts ranked by dollar amount. Using the non-parametric analysis lowers the variance, because it reduces the effect of the outliers in the analysis.

In order to assess whether the difference in contract values is attributable to chance, a P-value⁵ is calculated. The P-value takes into account the number of contracts, amount of contract dollars, and variation in contract dollars. If the difference between the actual and expected number of contracts and total contract dollars has a P-value of less than 0.05, the difference is statistically significant.⁶

There are two critical constraints in performing statistical tests of significance. First, the size of the population affects the power of the statistical results. In other words, a relatively small population size, whether in terms of the total number of contracts or the total number of available businesses, decreases the power of the statistical results. Second, although an inference of discrimination cannot be made if statistical significance is not obtained from the test, one cannot infer from the results that there was no discrimination. Thus, the results of the statistical disparity analysis are necessarily influenced by the size of the population in each industry and ethnic and gender category. Where the results are not statistically significant, the existence of discrimination *cannot* be ruled out. Given these limitations, the anecdotal data has an especially important role in explaining the conditions of discrimination that might exist in the market area.

The analysis of the value of contract dollars for each ethnic and gender group incorporates the number of contracts awarded. Hence, the disparity analysis for the value of contract dollars awarded reflects an analysis of both the number of contracts awarded and the value of the contract dollars received by each ethnic and gender group.

It is important to note that the findings of statistical significance may be counterintuitive. It is not infrequent that the same disparity ratio, or the same difference between the utilization percentage and the availability percentage, is statistically significant in one industry and not statistically significant in another.

The test of statistical significance determines whether the difference between the actual dollars and the expected dollars exceeds two standard deviations. However, the standard deviation is calculated separately by industry for each ethnic and gender group. For each industry studied the calculation of the standard deviation is based on the total number of

⁴ Non-parametric analysis is a method to make data more suitable for statistical testing by allowing one variable to be replaced with a new variable that maintains the essential characteristics of the original one. In this case, the contracts are ranked from the smallest to the largest. The dollar value of each contract is replaced with its rank order number.

⁵ P-value is a measure of statistical significance.

⁶ The study does not test statistically the overutilization of M/WBEs or the utilization of Caucasian Males.



contracts and dollars analyzed in the Study and each ethnic and gender groups, respective percentage of availability. Therefore, the findings of statistical significance are influenced by the percentage of availability for each ethnic and gender group in the industry. In effect across the industries, similar utilization patterns with different availability patterns could yield different findings of statistical significance.

II. DISPARITY ANALYSIS

A disparity analysis was performed on construction, architecture and engineering, professional services, and non-professional services contracts issued between October 1, 2002 and September 30, 2007.

As demonstrated in *Chapter 5: Availability Analysis*, the majority of the City's contracts were small with 87.79 percent under \$25,000 and 93.77 percent under \$100,000. The fact that the majority of the City's contracts were small suggests that the capacity needed to perform most of the contracts analyzed during the study period was minimal. There is also evidence that a notable number of willing firms had the capacity to perform contracts in excess of \$500,000. Therefore, a threshold of \$500,000 was set for the prime contractor disparity analysis to ensure that there were willing firms with the capacity to perform contracts included in the analysis. The prime contractor disparity findings in the four industries under consideration are summarized below.



A. Disparity Analysis: All Contracts under \$500,000, by Industry

1. Construction Contracts under \$500,000

The disparity analysis of all construction contracts under \$500,000 is depicted in Table 6.01 and Chart 6.01. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses represent 21.7 percent of the available construction firms and received 0.67 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 3.62 percent of the available construction firms and received 0.52 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Hispanic American Businesses represent 19.9 percent of the available construction firms and received 6.54 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 2.3 percent of the available construction firms and received 0.25 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Minority Business Enterprises represent 47.52 percent of the available construction firms and received 7.99 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 18.96 percent of the available construction firms and received 8.67 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 66.48 percent of available construction firms and received 16.66 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 33.52 percent of the available construction firms and received 83.34 percent of the dollars for construction contracts under \$500,000. This overutilization is statistically significant.



Table 6.01 Disparity Analysis: Construction Contracts under \$500,000, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$104,370	0.67%	21.70%	\$3,383,042	-\$3,278,672	0.03	< .05 *
Asian Americans	\$81,606	0.52%	3.62%	\$564,498	-\$482,892	0.14	< .05 *
Hispanic Americans	\$1,020,301	6.54%	19.90%	\$3,102,767	-\$2,082,466	0.33	< .05 *
Native Americans	\$39,616	0.25%	2.30%	\$359,226	-\$319,610	0.11	< .05 *
Caucasian Females	\$1,351,217	8.67%	18.96%	\$2,956,708	-\$1,605,491	0.46	< .05 *
Caucasian Males	\$12,995,676	83.34%	33.52%	\$5,226,544	\$7,769,132	2.49	< .05 †
TOTAL	\$15,592,785	100.00%	100.00%	\$15,592,785			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$15,415	0.10%	4.43%	\$690,820	-\$675,405	0.02	< .05 *
African American Males	\$88,955	0.57%	17.27%	\$2,692,223	-\$2,603,268	0.03	< .05 *
Asian American Females	\$81,606	0.52%	0.84%	\$130,269	-\$48,663	0.63	----
Asian American Males	\$0	0.00%	2.78%	\$434,229	-\$434,229	0.00	< .05 *
Hispanic American Females	\$302,826	1.94%	3.57%	\$556,603	-\$253,777	0.54	not significant
Hispanic American Males	\$717,475	4.60%	16.33%	\$2,546,164	-\$1,828,689	0.28	< .05 *
Native American Females	\$0	0.00%	0.78%	\$122,374	-\$122,374	0.00	----
Native American Males	\$39,616	0.25%	1.52%	\$236,852	-\$197,236	0.17	not significant
Caucasian Females	\$1,351,217	8.67%	18.96%	\$2,956,708	-\$1,605,491	0.46	< .05 *
Caucasian Males	\$12,995,676	83.34%	33.52%	\$5,226,544	\$7,769,132	2.49	< .05 †
TOTAL	\$15,592,785	100.00%	100.00%	\$15,592,785			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$399,847	2.56%	9.62%	\$1,500,065	-\$1,100,219	0.27	< .05 *
Minority Males	\$846,046	5.43%	37.90%	\$5,909,468	-\$5,063,422	0.14	< .05 *
Caucasian Females	\$1,351,217	8.67%	18.96%	\$2,956,708	-\$1,605,491	0.46	< .05 *
Caucasian Males	\$12,995,676	83.34%	33.52%	\$5,226,544	\$7,769,132	2.49	< .05 †
TOTAL	\$15,592,785	100.00%	100.00%	\$15,592,785			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,245,893	7.99%	47.52%	\$7,409,534	-\$6,163,641	0.17	< .05 *
Women Business Enterprises	\$1,351,217	8.67%	18.96%	\$2,956,708	-\$1,605,491	0.46	< .05 *
Minority and Women Business Enterprises	\$2,597,110	16.66%	66.48%	\$10,366,241	-\$7,769,132	0.25	< .05 *
Caucasian Male Business Enterprises	\$12,995,676	83.34%	33.52%	\$5,226,544	\$7,769,132	2.49	< .05 †

(*) denotes a statistically significant underutilization.

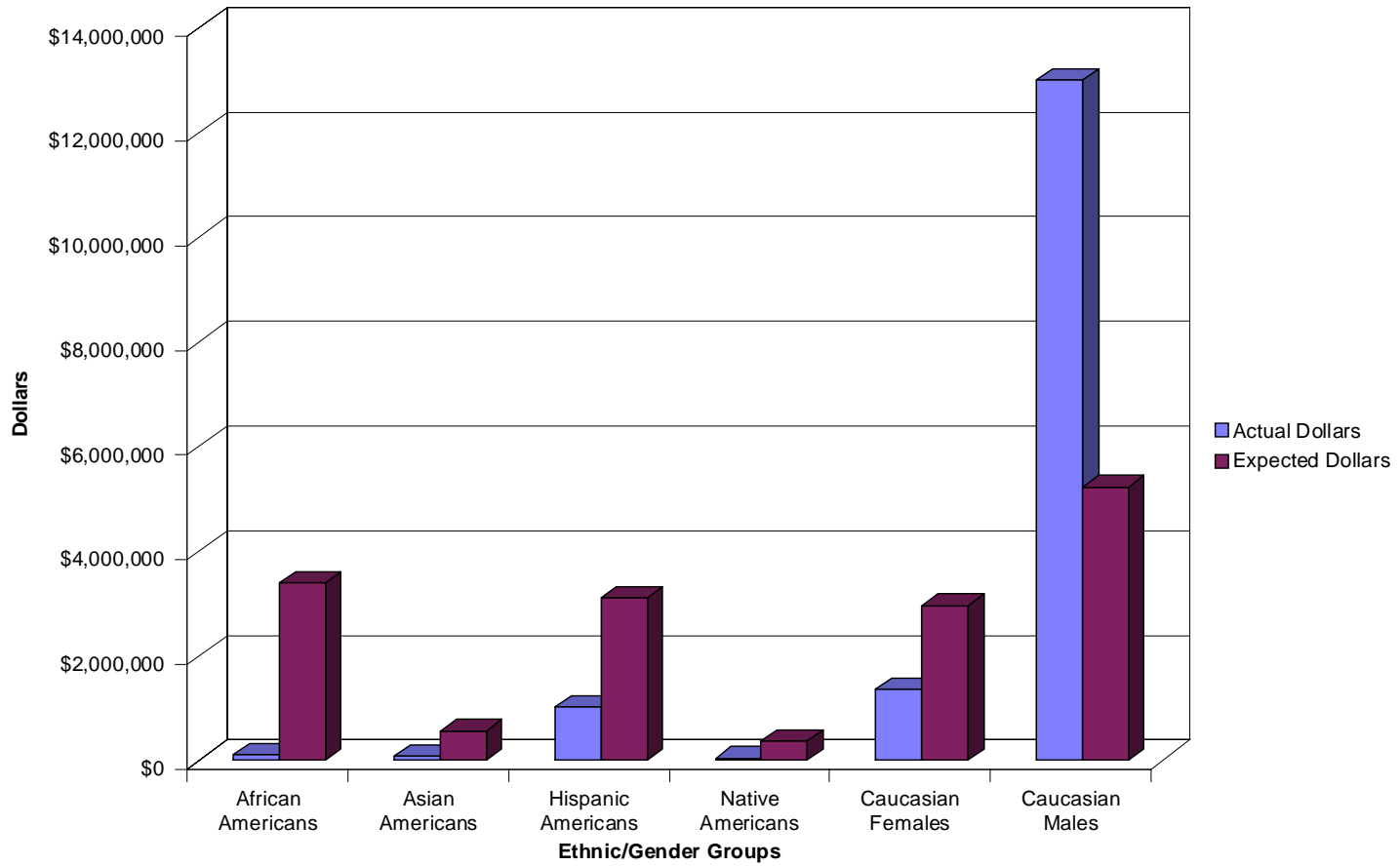
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.01 Disparity Analysis: Construction Contracts under \$500,000, October 1, 2002 to September 30, 2007



2. Architecture and Engineering Contracts under \$500,000

The disparity analysis of all architecture and engineering contracts under \$500,000 is depicted in Table 6.02 and Chart 6.02.

African American Businesses represent 14.28 percent of the available architecture and engineering firms and received 3.35 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 8.18 percent of the available architecture and engineering firms and received 7.67 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Hispanic American Businesses represent 11.86 percent of the available architecture and engineering firms and received 0.35 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 1.41 percent of the available architecture and engineering firms and received none of the dollars for architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Minority Business Enterprises represent 35.72 percent of the available architecture and engineering firms and received 11.37 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 18.3 percent of the available architecture and engineering firms and received 8.32 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 54.02 percent of the available architecture and engineering firms and received 19.69 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 45.98 percent of the available architecture and engineering firms and received 80.31 percent of the dollars for architecture and engineering contracts under \$500,000. This overutilization is statistically significant.



Table 6.02 Disparity Analysis: Architecture and Engineering Contracts under \$500,000, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$319,369	3.35%	14.28%	\$1,361,832	-\$1,042,463	0.23	< .05 *
Asian Americans	\$732,000	7.67%	8.18%	\$780,016	-\$48,016	0.94	not significant
Hispanic Americans	\$33,480	0.35%	11.86%	\$1,131,663	-\$1,098,183	0.03	< .05 *
Native Americans	\$0	0.00%	1.41%	\$134,265	-\$134,265	0.00	not significant
Caucasian Females	\$793,743	8.32%	18.30%	\$1,745,446	-\$951,703	0.45	< .05 *
Caucasian Males	\$7,660,622	80.31%	45.98%	\$4,385,993	\$3,274,630	1.75	< .05 †
TOTAL	\$9,539,214	100.00%	100.00%	\$9,539,214			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	2.82%	\$268,530	-\$268,530	0.00	< .05 *
African American Males	\$319,369	3.35%	11.46%	\$1,093,301	-\$773,933	0.29	< .05 *
Asian American Females	\$0	0.00%	1.61%	\$153,446	-\$153,446	0.00	not significant
Asian American Males	\$732,000	7.67%	6.57%	\$626,570	\$105,430	1.17	**
Hispanic American Females	\$0	0.00%	2.28%	\$217,382	-\$217,382	0.00	not significant
Hispanic American Males	\$33,480	0.35%	9.58%	\$914,281	-\$880,801	0.04	< .05 *
Native American Females	\$0	0.00%	0.40%	\$38,361	-\$38,361	0.00	----
Native American Males	\$0	0.00%	1.01%	\$95,904	-\$95,904	0.00	not significant
Caucasian Females	\$793,743	8.32%	18.30%	\$1,745,446	-\$951,703	0.45	< .05 *
Caucasian Males	\$7,660,622	80.31%	45.98%	\$4,385,993	\$3,274,630	1.75	< .05 †
TOTAL	\$9,539,214	100.00%	100.00%	\$9,539,214			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$0	0.00%	7.10%	\$677,719	-\$677,719	0.00	< .05 *
Minority Males	\$1,084,849	11.37%	28.62%	\$2,730,057	-\$1,645,208	0.40	< .05 *
Caucasian Females	\$793,743	8.32%	18.30%	\$1,745,446	-\$951,703	0.45	< .05 *
Caucasian Males	\$7,660,622	80.31%	45.98%	\$4,385,993	\$3,274,630	1.75	< .05 †
TOTAL	\$9,539,214	100.00%	100.00%	\$9,539,214			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,084,849	11.37%	35.72%	\$3,407,776	-\$2,322,927	0.32	< .05 *
Women Business Enterprises	\$793,743	8.32%	18.30%	\$1,745,446	-\$951,703	0.45	< .05 *
Minority and Women Business Enterprises	\$1,878,592	19.69%	54.02%	\$5,153,222	-\$3,274,630	0.36	< .05 *
Caucasian Male Business Enterprises	\$7,660,622	80.31%	45.98%	\$4,385,993	\$3,274,630	1.75	< .05 †

(*) denotes a statistically significant underutilization.

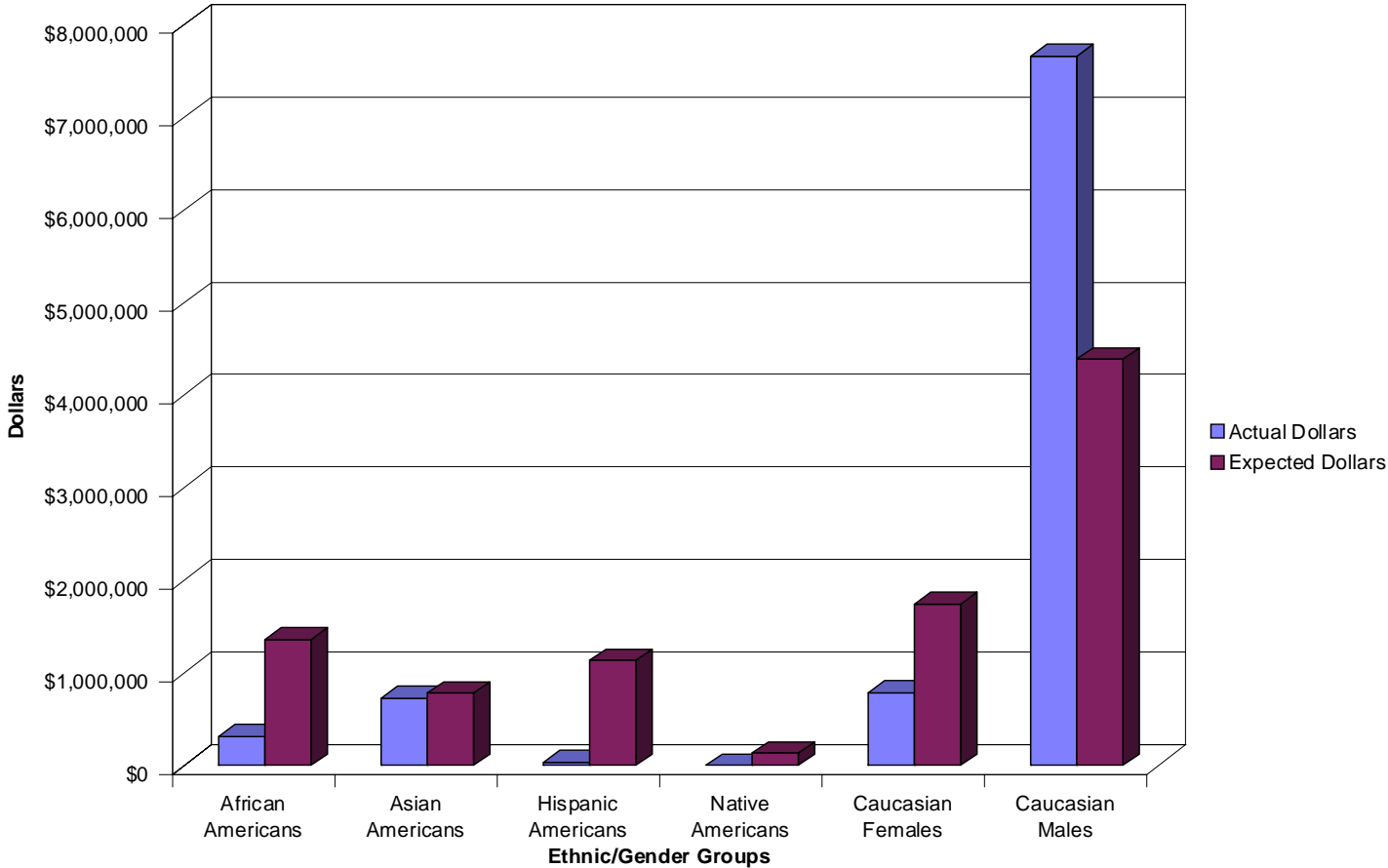
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.02 Disparity Analysis: Architecture and Engineering Contracts under \$500,000, October 1, 2002 to September 30, 2007



Mason Tillman Associates, Ltd. June 2010
 City of Arlington Availability and Disparity Study

3. Professional Services Contracts under \$500,000

The disparity analysis of all professional services contracts under \$500,000 is depicted in Table 6.03 and Chart 6.03.

African American Businesses represent 20.59 percent of the available professional services firms and received none of the professional services contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 6.31 percent of the available professional services firms and received 1.84 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Hispanic American Businesses represent 8.87 percent of the available professional services firms and received 21.29 percent of the dollars for professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Native American Businesses represent 1.02 percent of the available professional services firms and received 0.22 percent of the dollars for professional services contracts under \$500,000. While this group was underutilized, there are too few available firms to determine statistical significance.

Minority Business Enterprises represent 36.79 percent of the available professional services firms and received 23.35 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 25.29 percent of the available professional services firms and received 0.01 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 62.08 percent of the available professional services firms and received 23.35 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 37.92 percent of the available professional services firms and received 76.65 percent of the dollars for professional services contracts under \$500,000. This overutilization is statistically significant.



Table 6.03 Disparity Analysis: Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$0	0.00%	20.59%	\$1,177,437	-\$1,177,437	0.00	< .05 *
Asian Americans	\$104,962	1.84%	6.31%	\$360,940	-\$255,978	0.29	< .05 *
Hispanic Americans	\$1,217,354	21.29%	8.87%	\$506,952	\$710,402	2.40	**
Native Americans	\$12,730	0.22%	1.02%	\$58,405	-\$45,675	0.22	not significant
Caucasian Females	\$339	0.01%	25.29%	\$1,446,098	-\$1,445,759	0.00	< .05 *
Caucasian Males	\$4,382,425	76.65%	37.92%	\$2,167,979	\$2,214,446	2.02	< .05 †
TOTAL	\$5,717,810	100.00%	100.00%	\$5,717,810			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	9.38%	\$536,154	-\$536,154	0.00	< .05 *
African American Males	\$0	0.00%	11.22%	\$641,282	-\$641,282	0.00	< .05 *
Asian American Females	\$0	0.00%	2.02%	\$115,641	-\$115,641	0.00	not significant
Asian American Males	\$104,962	1.84%	4.29%	\$245,299	-\$140,337	0.43	not significant
Hispanic American Females	\$1,102,546	19.28%	3.06%	\$175,214	\$927,332	6.29	**
Hispanic American Males	\$114,808	2.01%	5.80%	\$331,738	-\$216,930	0.35	< .05 *
Native American Females	\$1,100	0.02%	0.41%	\$23,362	-\$22,262	0.05	----
Native American Males	\$11,630	0.20%	0.61%	\$35,043	-\$23,413	0.33	----
Caucasian Females	\$339	0.01%	25.29%	\$1,446,098	-\$1,445,759	0.00	< .05 *
Caucasian Males	\$4,382,425	76.65%	37.92%	\$2,167,979	\$2,214,446	2.02	< .05 †
TOTAL	\$5,717,810	100.00%	100.00%	\$5,717,810			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$1,103,646	19.30%	14.87%	\$850,371	\$253,275	1.30	**
Minority Males	\$231,400	4.05%	21.92%	\$1,253,363	-\$1,021,963	0.18	< .05 *
Caucasian Females	\$339	0.01%	25.29%	\$1,446,098	-\$1,445,759	0.00	< .05 *
Caucasian Males	\$4,382,425	76.65%	37.92%	\$2,167,979	\$2,214,446	2.02	< .05 †
TOTAL	\$5,717,810	100.00%	100.00%	\$5,717,810			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,335,046	23.35%	36.79%	\$2,103,734	-\$768,687	0.63	< .05 *
Women Business Enterprises	\$339	0.01%	25.29%	\$1,446,098	-\$1,445,759	0.00	< .05 *
Minority and Women Business Enterprises	\$1,335,385	23.35%	62.08%	\$3,549,831	-\$2,214,446	0.38	< .05 *
Caucasian Male Business Enterprises	\$4,382,425	76.65%	37.92%	\$2,167,979	\$2,214,446	2.02	< .05 †

(*) denotes a statistically significant underutilization.

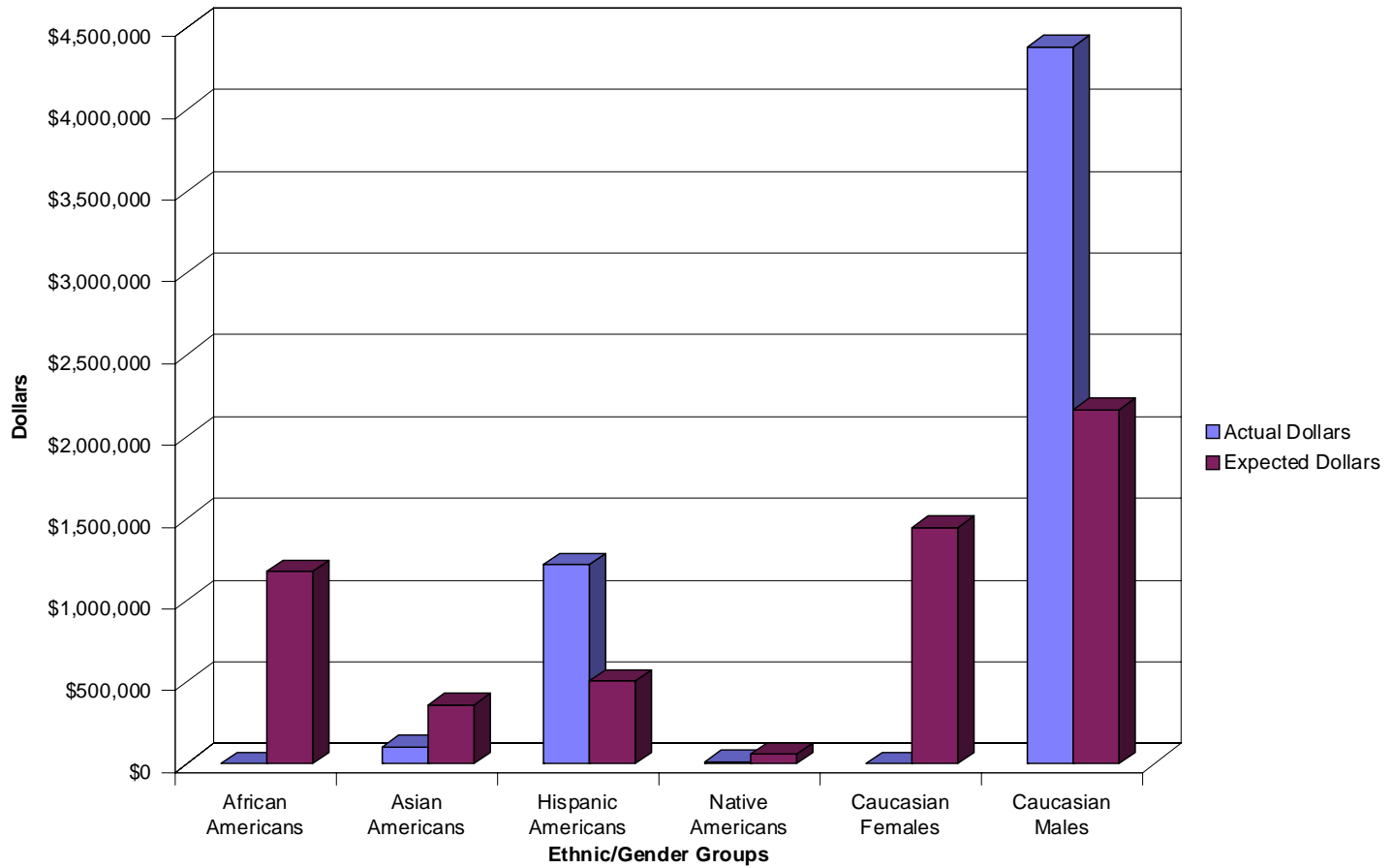
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.03 Disparity Analysis: Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007



4. Non-Professional Services Contracts under \$500,000

The disparity analysis of all non-professional services contracts under \$500,000 is depicted in Table 6.04 and Chart 6.04.

African American Businesses represent 19.71 percent of the available non-professional services firms and received 2.81 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 3.31 percent of the available non-professional services firms and received 4.41 percent of the dollars for non-professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Hispanic American Businesses represent 9.57 percent of the available non-professional services firms and received 3.53 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 0.87 percent of the available non-professional services firms and received 0.83 percent of the dollars for non-professional services contracts under \$500,000. While this group was underutilized, there are too few available firms to determine statistical significance.

Minority Business Enterprises represent 33.46 percent of the available non-professional services firms and received 11.58 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 20.14 percent of the available non-professional services firms and received 5.81 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 53.6 percent of the available non-professional services firms and received 17.39 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 46.4 percent of the available non-professional services firms and received 82.61 percent of the dollars for non-professional services contracts under \$500,000. This overutilization is statistically significant.



Table 6.04 Disparity Analysis: Non-Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$768,217	2.81%	19.71%	\$5,392,525	-\$4,624,308	0.14	< .05 *
Asian Americans	\$1,207,094	4.41%	3.31%	\$904,922	\$302,172	1.33	**
Hispanic Americans	\$965,947	3.53%	9.57%	\$2,617,208	-\$1,651,261	0.37	< .05 *
Native Americans	\$227,087	0.83%	0.87%	\$238,845	-\$11,758	0.95	----
Caucasian Females	\$1,589,458	5.81%	20.14%	\$5,510,266	-\$3,920,807	0.29	< .05 *
Caucasian Males	\$22,601,776	82.61%	46.40%	\$12,695,813	\$9,905,963	1.78	< .05 †
TOTAL	\$27,359,579	100.00%	100.00%	\$27,359,579			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$378,567	1.38%	6.85%	\$1,873,759	-\$1,495,193	0.20	< .05 *
African American Males	\$389,650	1.42%	12.86%	\$3,518,765	-\$3,129,116	0.11	< .05 *
Asian American Females	\$11,255	0.04%	1.07%	\$292,670	-\$281,415	0.04	< .05 *
Asian American Males	\$1,195,839	4.37%	2.24%	\$612,252	\$583,587	1.95	**
Hispanic American Females	\$246,547	0.90%	2.93%	\$800,637	-\$554,090	0.31	< .05 *
Hispanic American Males	\$719,400	2.63%	6.64%	\$1,816,571	-\$1,097,171	0.40	< .05 *
Native American Females	\$227,012	0.83%	0.39%	\$107,649	\$119,364	2.11	**
Native American Males	\$75	0.00%	0.48%	\$131,197	-\$131,122	0.00	----
Caucasian Females	\$1,589,458	5.81%	20.14%	\$5,510,266	-\$3,920,807	0.29	< .05 *
Caucasian Males	\$22,601,776	82.61%	46.40%	\$12,695,813	\$9,905,963	1.78	< .05 †
TOTAL	\$27,359,579	100.00%	100.00%	\$27,359,579			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$863,381	3.16%	11.24%	\$3,074,715	-\$2,211,334	0.28	< .05 *
Minority Males	\$2,304,964	8.42%	22.22%	\$6,078,785	-\$3,773,821	0.38	< .05 *
Caucasian Females	\$1,589,458	5.81%	20.14%	\$5,510,266	-\$3,920,807	0.29	< .05 *
Caucasian Males	\$22,601,776	82.61%	46.40%	\$12,695,813	\$9,905,963	1.78	< .05 †
TOTAL	\$27,359,579	100.00%	100.00%	\$27,359,579			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$3,168,344	11.58%	33.46%	\$9,153,500	-\$5,985,155	0.35	< .05 *
Women Business Enterprises	\$1,589,458	5.81%	20.14%	\$5,510,266	-\$3,920,807	0.29	< .05 *
Minority and Women Business Enterprises	\$4,757,803	17.39%	53.60%	\$14,663,765	-\$9,905,963	0.32	< .05 *
Caucasian Male Business Enterprises	\$22,601,776	82.61%	46.40%	\$12,695,813	\$9,905,963	1.78	< .05 †

(*) denotes a statistically significant underutilization.

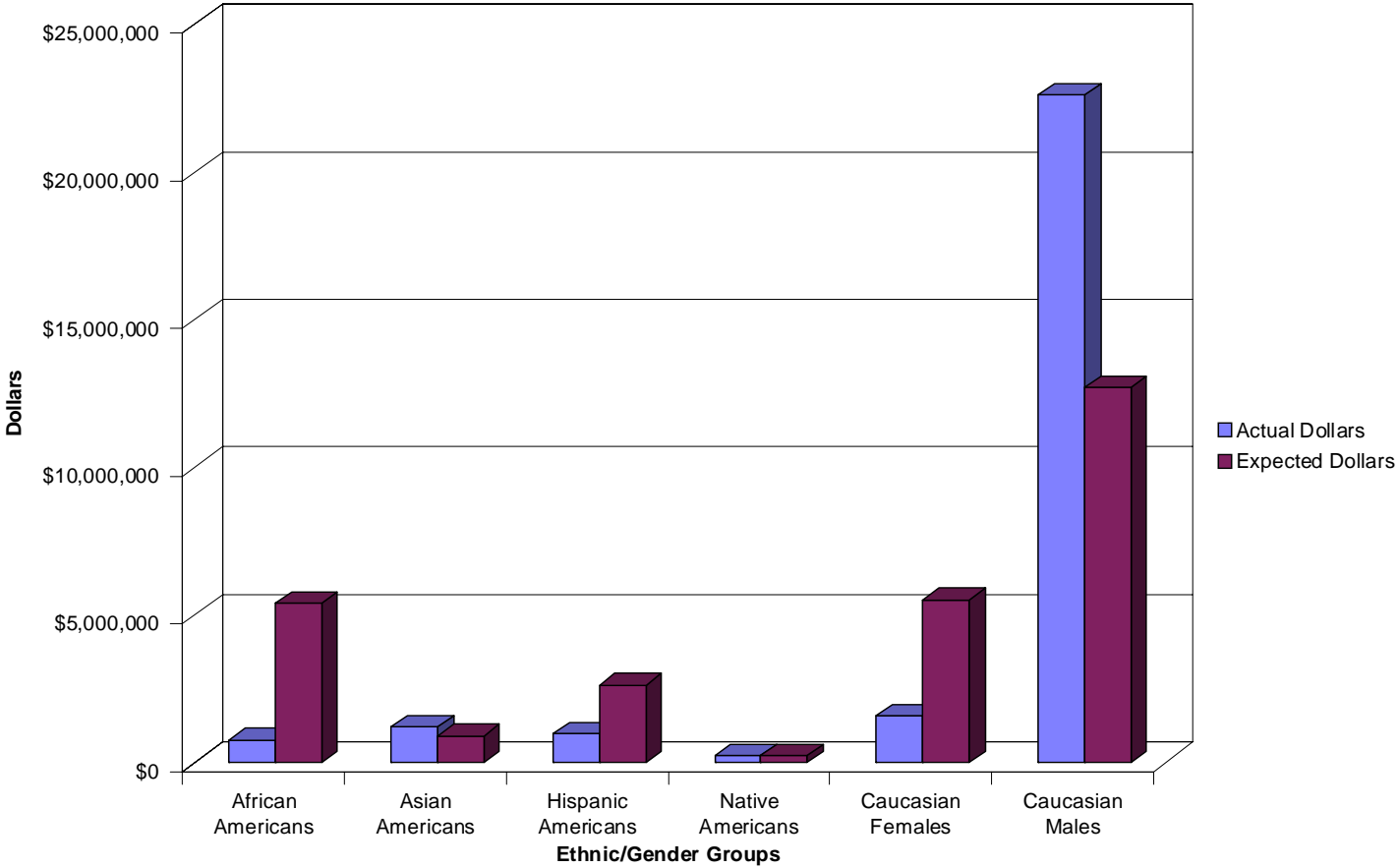
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.04 Disparity Analysis: Non-Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007



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B. Disparity Analysis: All Contracts \$25,000 and under, by Industry

1. Construction Contracts \$25,000 and under

The disparity analysis of all construction contracts \$25,000 and under is depicted in Table 6.05 and Chart 6.05.

African American Businesses represent 21.7 percent of the available construction firms and received 2 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 3.62 percent of the available construction firms and received 1.11 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 19.9 percent of the available construction firms and received 4.91 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Native American Businesses represent 2.3 percent of the available construction firms and received 2.24 percent of the dollars for construction contracts \$25,000 and under. This underutilization is not statistically significant.

Minority Business Enterprises represent 47.52 percent of the available construction firms and received 10.26 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 18.96 percent of the available construction firms and received 13.65 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 66.48 percent of the available construction firms and received 23.91 percent of the dollars for construction contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 33.52 percent of the available construction firms and received 76.09 percent of the dollars for construction contracts \$25,000 and under. This overutilization is statistically significant.



Table 6.05 Disparity Analysis: Construction Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$35,368	2.00%	21.70%	\$383,987	-\$348,619	0.09	< .05 *
Asian Americans	\$19,625	1.11%	3.62%	\$64,072	-\$44,447	0.31	< .05 *
Hispanic Americans	\$86,985	4.91%	19.90%	\$352,175	-\$265,189	0.25	< .05 *
Native Americans	\$39,616	2.24%	2.30%	\$40,773	-\$1,157	0.97	not significant
Caucasian Females	\$241,560	13.65%	18.96%	\$335,596	-\$94,036	0.72	< .05 *
Caucasian Males	\$1,346,679	76.09%	33.52%	\$593,230	\$753,449	2.27	< .05 †
TOTAL	\$1,769,834	100.00%	100.00%	\$1,769,834			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$15,415	0.87%	4.43%	\$78,410	-\$62,995	0.20	< .05 *
African American Males	\$19,953	1.13%	17.27%	\$305,576	-\$285,623	0.07	< .05 *
Asian American Females	\$19,625	1.11%	0.84%	\$14,786	\$4,839	1.33	**
Asian American Males	\$0	0.00%	2.78%	\$49,287	-\$49,287	0.00	< .05 *
Hispanic American Females	\$84,885	4.80%	3.57%	\$63,176	\$21,709	1.34	**
Hispanic American Males	\$2,100	0.12%	16.33%	\$288,998	-\$286,898	0.01	< .05 *
Native American Females	\$0	0.00%	0.78%	\$13,890	-\$13,890	0.00	----
Native American Males	\$39,616	2.24%	1.52%	\$26,884	\$12,732	1.47	**
Caucasian Females	\$241,560	13.65%	18.96%	\$335,596	-\$94,036	0.72	< .05 *
Caucasian Males	\$1,346,679	76.09%	33.52%	\$593,230	\$753,449	2.27	< .05 †
TOTAL	\$1,769,834	100.00%	100.00%	\$1,769,834			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$119,925	6.78%	9.62%	\$170,262	-\$50,337	0.70	< .05 *
Minority Males	\$61,669	3.48%	37.90%	\$670,745	-\$609,076	0.09	< .05 *
Caucasian Females	\$241,560	13.65%	18.96%	\$335,596	-\$94,036	0.72	< .05 *
Caucasian Males	\$1,346,679	76.09%	33.52%	\$593,230	\$753,449	2.27	< .05 †
TOTAL	\$1,769,834	100.00%	100.00%	\$1,769,834			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$181,594	10.26%	47.52%	\$841,007	-\$659,413	0.22	< .05 *
Women Business Enterprises	\$241,560	13.65%	18.96%	\$335,596	-\$94,036	0.72	< .05 *
Minority and Women Business Enterprises	\$423,154	23.91%	66.48%	\$1,176,603	-\$753,449	0.36	< .05 *
Caucasian Male Business Enterprises	\$1,346,679	76.09%	33.52%	\$593,230	\$753,449	2.27	< .05 †

(*) denotes a statistically significant underutilization.

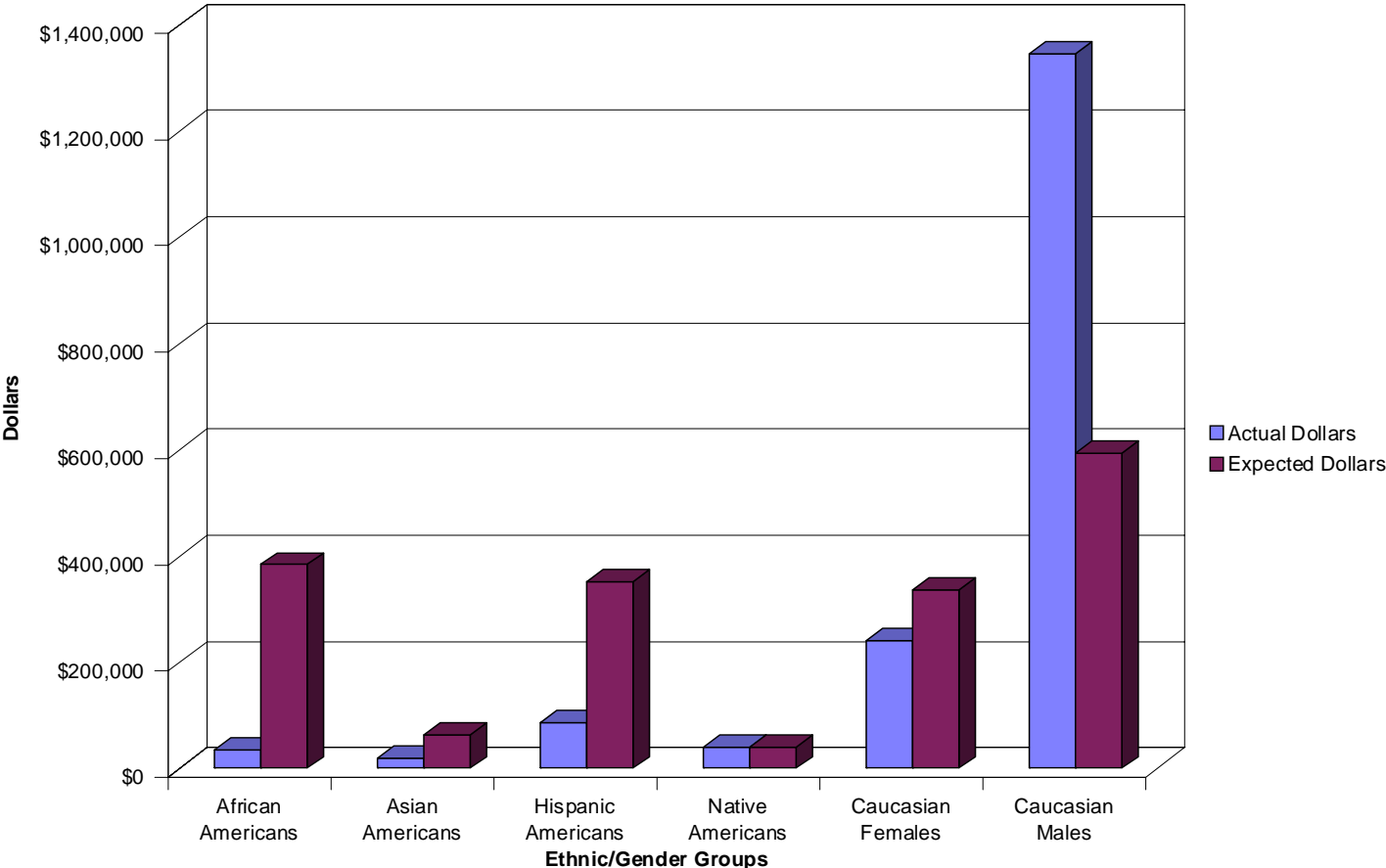
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.05 Disparity Analysis: Construction Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



2. Architecture and Engineering Contracts \$25,000 and under

The disparity analysis of all architecture and engineering contracts \$25,000 and under is depicted in Table 6.06 and Chart 6.06.

African American Businesses represent 14.28 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 8.18 percent of the available architecture and engineering firms and received 1.19 percent of the architecture and engineering contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 11.86 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$25,000 and under. This underutilization is statistically significant.

Native American Businesses represent 1.41 percent of the available architecture and engineering firms and received none of the dollars for architecture and engineering contracts \$25,000 and under. This underutilization is not statistically significant.

Minority Business Enterprises represent 35.72 percent of the available architecture and engineering firms and received 1.19 percent of the dollars for architecture and engineering contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 18.3 percent of the available architecture and engineering firms and received 14.03 percent of the dollars for architecture and engineering contracts \$25,000 and under. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 54.02 percent of the available architecture and engineering firms and received 15.22 percent of the dollars for architecture and engineering contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 45.98 percent of the available architecture and engineering firms and received 84.78 percent of the dollars for architecture and engineering contracts \$25,000 and under. This overutilization is statistically significant.



**Table 6.06 Disparity Analysis: Architecture and Engineering Contracts \$25,000 and under,
October 1, 2002 to September 30, 2007**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity^	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$0	0.00%	14.28%	\$68,849	-\$68,849	0.00	< .05 *
Asian Americans	\$5,720	1.19%	8.18%	\$39,434	-\$33,714	0.15	< .05 *
Hispanic Americans	\$0	0.00%	11.86%	\$57,212	-\$57,212	0.00	< .05 *
Native Americans	\$0	0.00%	1.41%	\$6,788	-\$6,788	0.00	not significant
Caucasian Females	\$67,679	14.03%	18.30%	\$88,243	-\$20,563	0.77	not significant
Caucasian Males	\$408,865	84.78%	45.98%	\$221,738	\$187,127	1.84	< .05 †
TOTAL	\$482,264	100.00%	100.00%	\$482,264			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	2.82%	\$13,576	-\$13,576	0.00	not significant
African American Males	\$0	0.00%	11.46%	\$55,273	-\$55,273	0.00	< .05 *
Asian American Females	\$0	0.00%	1.61%	\$7,758	-\$7,758	0.00	not significant
Asian American Males	\$5,720	1.19%	6.57%	\$31,677	-\$25,957	0.18	not significant
Hispanic American Females	\$0	0.00%	2.28%	\$10,990	-\$10,990	0.00	not significant
Hispanic American Males	\$0	0.00%	9.58%	\$46,222	-\$46,222	0.00	< .05 *
Native American Females	\$0	0.00%	0.40%	\$1,939	-\$1,939	0.00	----
Native American Males	\$0	0.00%	1.01%	\$4,849	-\$4,849	0.00	not significant
Caucasian Females	\$67,679	14.03%	18.30%	\$88,243	-\$20,563	0.77	not significant
Caucasian Males	\$408,865	84.78%	45.98%	\$221,738	\$187,127	1.84	< .05 †
TOTAL	\$482,264	100.00%	100.00%	\$482,264			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$0	0.00%	7.10%	\$34,263	-\$34,263	0.00	< .05 *
Minority Males	\$5,720	1.19%	28.62%	\$138,021	-\$132,301	0.04	< .05 *
Caucasian Females	\$67,679	14.03%	18.30%	\$88,243	-\$20,563	0.77	not significant
Caucasian Males	\$408,865	84.78%	45.98%	\$221,738	\$187,127	1.84	< .05 †
TOTAL	\$482,264	100.00%	100.00%	\$482,264			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$5,720	1.19%	35.72%	\$172,283	-\$166,563	0.03	< .05 *
Women Business Enterprises	\$67,679	14.03%	18.30%	\$88,243	-\$20,563	0.77	not significant
Minority and Women Business Enterprises	\$73,399	15.22%	54.02%	\$260,526	-\$187,127	0.28	< .05 *
Caucasian Male Business Enterprises	\$408,865	84.78%	45.98%	\$221,738	\$187,127	1.84	< .05 †

(*) denotes a statistically significant underutilization.

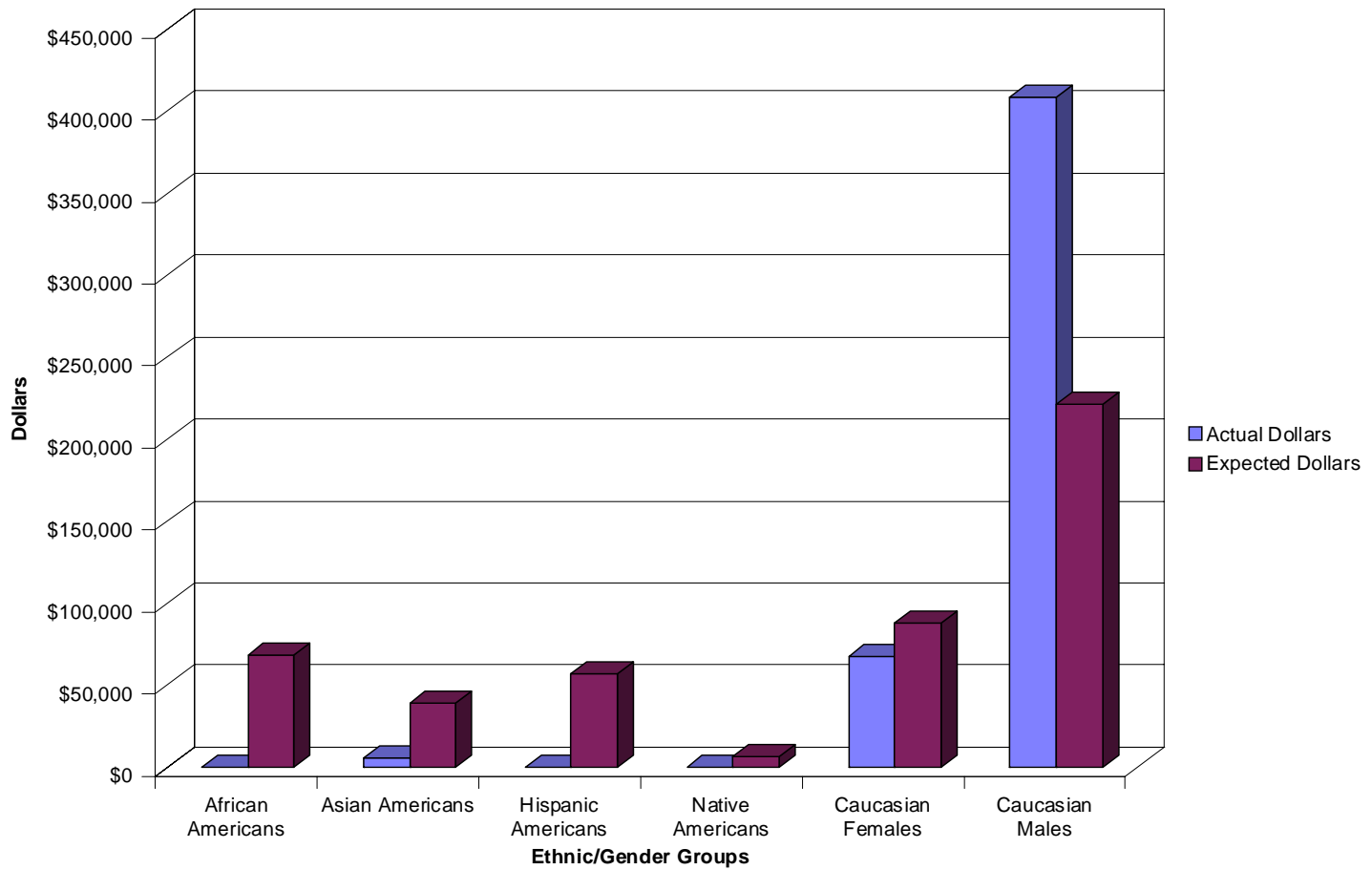
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

^ See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.06 Disparity Analysis: Architecture and Engineering Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



3. Professional Services Contracts \$25,000 and under

The disparity analysis of all professional services contracts \$25,000 and under is depicted in Table 6.07 and Chart 6.07.

African American Businesses represent 20.59 percent of the available professional services firms and received none of the professional services contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 6.31 percent of the available professional services firms and received none of the professional services contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 8.87 percent of the available professional services firms and received 4.54 percent of the dollars for professional services contracts \$25,000 and under. This underutilization is not statistically significant.

Native American Businesses represent 1.02 percent of the available professional services firms and received 2.53 percent of the dollars for professional services contracts \$25,000 and under. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 36.79 percent of the available professional services firms and received 7.07 percent of the dollars for professional services contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 25.29 percent of the available professional services firms and received 0.07 percent of the dollars for professional services contracts \$25,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 62.08 percent of the available professional services firms and received 7.13 percent of the dollars for professional services contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 37.92 percent of the available professional services firms and received 92.87 percent of the dollars for professional services contracts \$25,000 and under. This overutilization is statistically significant.



Table 6.07 Disparity Analysis: Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$0	0.00%	20.59%	\$103,730	-\$103,730	0.00	< .05 *
Asian Americans	\$0	0.00%	6.31%	\$31,798	-\$31,798	0.00	< .05 *
Hispanic Americans	\$22,871	4.54%	8.87%	\$44,662	-\$21,790	0.51	not significant
Native Americans	\$12,730	2.53%	1.02%	\$5,145	\$7,585	2.47	**
Caucasian Females	\$339	0.07%	25.29%	\$127,399	-\$127,060	0.00	< .05 *
Caucasian Males	\$467,790	92.87%	37.92%	\$190,996	\$276,795	2.45	< .05 †
TOTAL	\$503,730	100.00%	100.00%	\$503,730			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	9.38%	\$47,234	-\$47,234	0.00	< .05 *
African American Males	\$0	0.00%	11.22%	\$56,496	-\$56,496	0.00	< .05 *
Asian American Females	\$0	0.00%	2.02%	\$10,188	-\$10,188	0.00	not significant
Asian American Males	\$0	0.00%	4.29%	\$21,610	-\$21,610	0.00	< .05 *
Hispanic American Females	\$22,871	4.54%	3.06%	\$15,436	\$7,435	1.48	**
Hispanic American Males	\$0	0.00%	5.80%	\$29,226	-\$29,226	0.00	< .05 *
Native American Females	\$1,100	0.22%	0.41%	\$2,058	-\$958	0.53	----
Native American Males	\$11,630	2.31%	0.61%	\$3,087	\$8,543	3.77	**
Caucasian Females	\$339	0.07%	25.29%	\$127,399	-\$127,060	0.00	< .05 *
Caucasian Males	\$467,790	92.87%	37.92%	\$190,996	\$276,795	2.45	< .05 †
TOTAL	\$503,730	100.00%	100.00%	\$503,730			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$23,971	4.76%	14.87%	\$74,916	-\$50,945	0.32	< .05 *
Minority Males	\$11,630	2.31%	21.92%	\$110,419	-\$98,789	0.11	< .05 *
Caucasian Females	\$339	0.07%	25.29%	\$127,399	-\$127,060	0.00	< .05 *
Caucasian Males	\$467,790	92.87%	37.92%	\$190,996	\$276,795	2.45	< .05 †
TOTAL	\$503,730	100.00%	100.00%	\$503,730			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$35,601	7.07%	36.79%	\$185,336	-\$149,734	0.19	< .05 *
Women Business Enterprises	\$339	0.07%	25.29%	\$127,399	-\$127,060	0.00	< .05 *
Minority and Women Business Enterprises	\$35,940	7.13%	62.08%	\$312,735	-\$276,795	0.11	< .05 *
Caucasian Male Business Enterprises	\$467,790	92.87%	37.92%	\$190,996	\$276,795	2.45	< .05 †

(*) denotes a statistically significant underutilization.

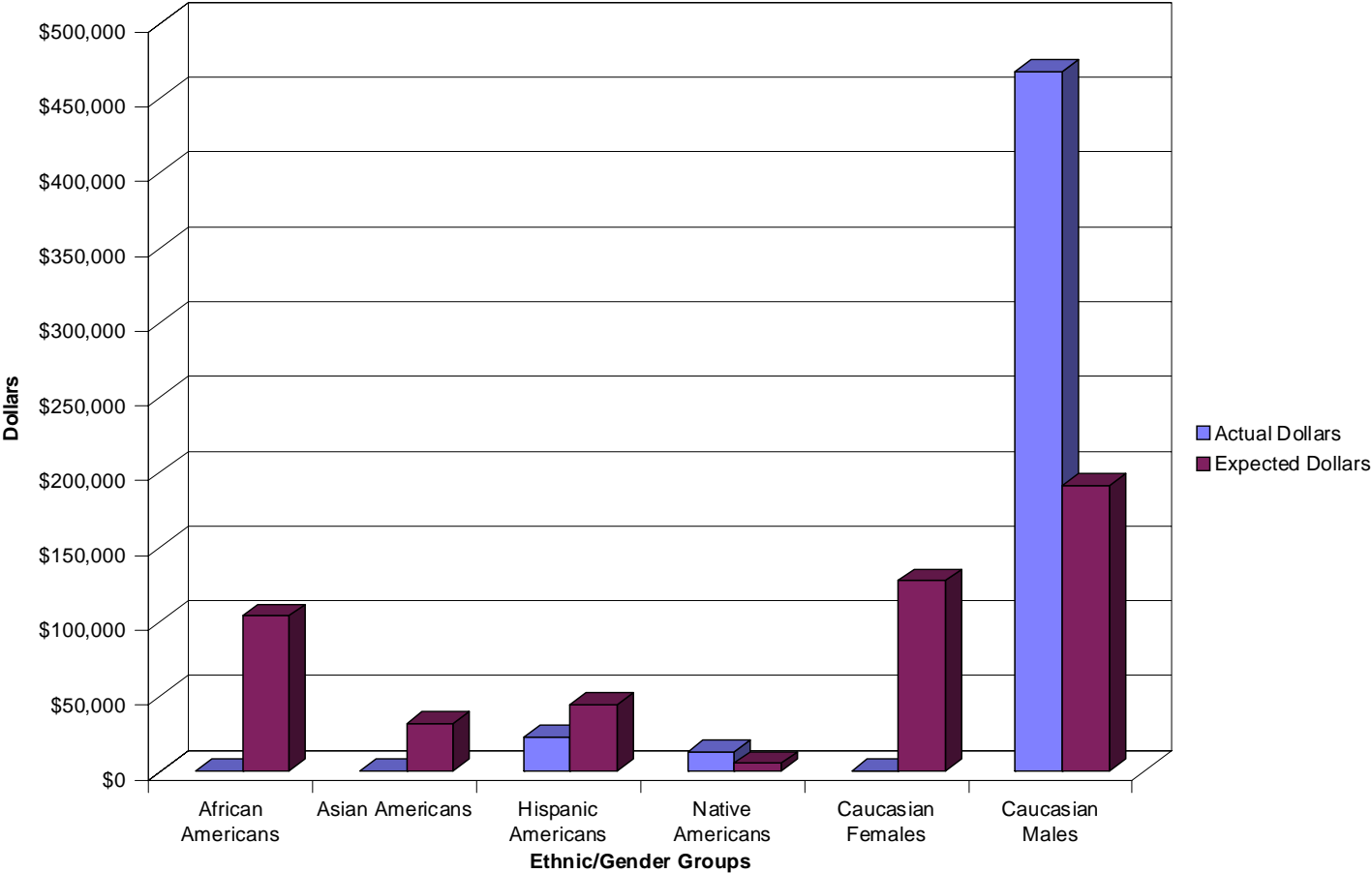
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.07 Disparity Analysis: Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



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4. Non-Professional Services Contracts \$25,000 and under

The disparity analysis of all non-professional services contracts \$25,000 and under is depicted in Table 6.08 and Chart 6.08.

African American Businesses represent 19.71 percent of the available non-professional services firms and received 1.72 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 3.31 percent of the available non-professional services firms and received 0.74 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 9.57 percent of the available non-professional services firms and received 3.56 of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Native American Businesses represent 0.87 percent of the available non-professional services firms and received 0.79 percent of the dollars for non-professional services contracts \$25,000 and under. While this group was underutilized, there were too few available firms to determine statistical significance.

Minority Business Enterprises represent 33.46 percent of the available non-professional services firms and received 6.81 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 20.14 percent of the available non-professional services firms and received 12.48 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 53.6 percent of the available non-professional services firms and received 19.29 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 46.4 percent of the available non-professional services firms and received 80.71 percent of the dollars for non-professional services contracts \$25,000 and under. This overutilization is statistically significant.



Table 6.08 Disparity Analysis: Non-Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$121,822	1.72%	19.71%	\$1,392,548	-\$1,270,726	0.09	< .05 *
Asian Americans	\$52,025	0.74%	3.31%	\$233,684	-\$181,659	0.22	< .05 *
Hispanic Americans	\$251,619	3.56%	9.57%	\$675,859	-\$424,240	0.37	< .05 *
Native Americans	\$55,815	0.79%	0.87%	\$61,679	-\$5,864	0.90	----
Caucasian Females	\$881,471	12.48%	20.14%	\$1,422,953	-\$541,481	0.62	< .05 *
Caucasian Males	\$5,702,496	80.71%	46.40%	\$3,278,525	\$2,423,971	1.74	< .05 †
TOTAL	\$7,065,247	100.00%	100.00%	\$7,065,247			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$13,501	0.19%	6.85%	\$483,873	-\$470,372	0.03	< .05 *
African American Males	\$108,321	1.53%	12.86%	\$908,674	-\$800,354	0.12	< .05 *
Asian American Females	\$11,255	0.16%	1.07%	\$75,578	-\$64,324	0.15	< .05 *
Asian American Males	\$40,770	0.58%	2.24%	\$158,106	-\$117,336	0.26	< .05 *
Hispanic American Females	\$22,807	0.32%	2.93%	\$206,754	-\$183,947	0.11	< .05 *
Hispanic American Males	\$228,812	3.24%	6.64%	\$469,105	-\$240,293	0.49	< .05 *
Native American Females	\$55,740	0.79%	0.39%	\$27,799	\$27,941	2.01	**
Native American Males	\$75	0.00%	0.48%	\$33,880	-\$33,805	0.00	----
Caucasian Females	\$881,471	12.48%	20.14%	\$1,422,953	-\$541,481	0.62	< .05 *
Caucasian Males	\$5,702,496	80.71%	46.40%	\$3,278,525	\$2,423,971	1.74	< .05 †
TOTAL	\$7,065,247	100.00%	100.00%	\$7,065,247			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$103,302	1.46%	11.24%	\$794,004	-\$690,702	0.13	< .05 *
Minority Males	\$377,978	5.35%	22.22%	\$1,569,765	-\$1,191,787	0.24	< .05 *
Caucasian Females	\$881,471	12.48%	20.14%	\$1,422,953	-\$541,481	0.62	< .05 *
Caucasian Males	\$5,702,496	80.71%	46.40%	\$3,278,525	\$2,423,971	1.74	< .05 †
TOTAL	\$7,065,247	100.00%	100.00%	\$7,065,247			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$481,280	6.81%	33.46%	\$2,363,770	-\$1,882,489	0.20	< .05 *
Women Business Enterprises	\$881,471	12.48%	20.14%	\$1,422,953	-\$541,481	0.62	< .05 *
Minority and Women Business Enterprises	\$1,362,752	19.29%	53.60%	\$3,786,722	-\$2,423,971	0.36	< .05 *
Caucasian Male Business Enterprises	\$5,702,496	80.71%	46.40%	\$3,278,525	\$2,423,971	1.74	< .05 †

(*) denotes a statistically significant underutilization.

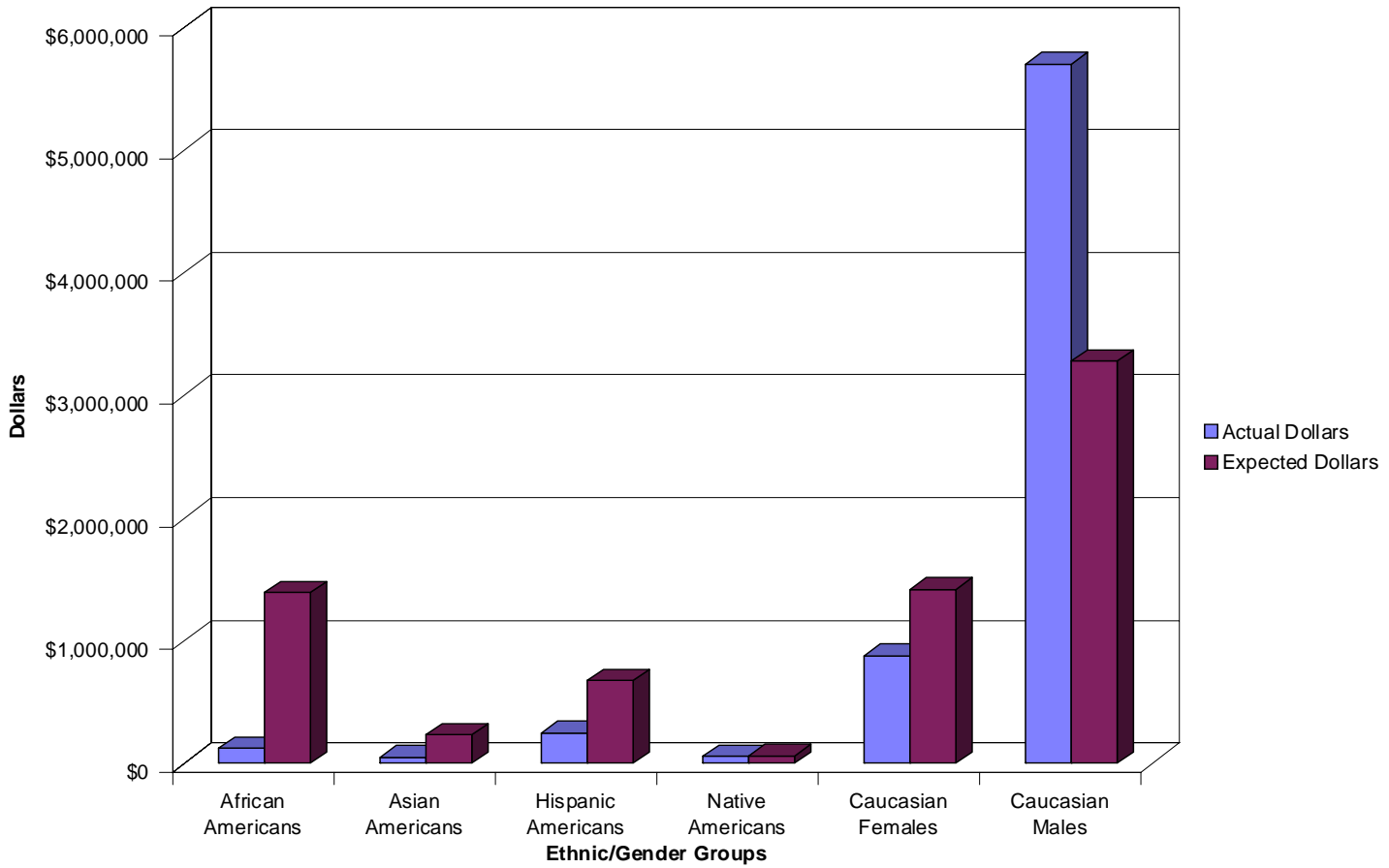
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.08 Disparity Analysis: Non-Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



Mason Tillman Associates, Ltd. June 2010
 City of Arlington Availability and Disparity Study

III. SUMMARY

A. Construction Contracts

As indicated in Table 6.09, African American, Asian American, and Hispanic American construction contractors were determined to be underutilized at both the informal and formal contract levels. Native American construction contractors were underutilized at the formal contract level. Women Business Enterprises were also determined to be underutilized at both the informal and formal contract levels.

Table 6.09 Disparity Summary: Construction Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Construction	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	Yes	Yes
Native Americans	Yes	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



B. Architecture and Engineering Contracts

As indicated in Table 6.10, African American and Hispanic American architecture and engineering contractors were determined to be underutilized at both the informal and formal contract levels. Asian Americans were underutilized at the informal contract level. Women Business Enterprises were also determined to be underutilized at the formal contract level.

**Table 6.10 Disparity Summary: Architecture and Engineering
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Architecture and Engineering	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	No
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



C. Professional Services Contracts

As indicated in Table 6.11, African American Business Enterprises professional services contractors were determined to be underutilized at both the informal and formal contract levels. Women Business Enterprises were also determined to be underutilized at both the informal and formal contract levels.

**Table 6.11 Disparity Summary: Professional Services
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Professional Services	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	No	No
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



D. Non-Professional Services Contracts

As indicated in Table 6.12, African American and Hispanic American non-professional services contractors were determined to be underutilized at both the informal and formal contract levels. Asian American Business Enterprises were determined to be underutilized at the informal contract level. Women Business Enterprises were also underutilized at both the informal and formal contract levels.

**Table 6.12 Disparity Summary: Non-Professional Services
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Non-Professional Services	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	No	---
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.





7

SUBCONTRACTOR DISPARITY ANALYSIS

I. INTRODUCTION

The objective of this analysis is to determine if minority and woman-owned business enterprise (M/WBE) subcontractors were underutilized at a statistically significant level. A detailed discussion of the statistical procedures for conducting a disparity analysis is set forth in *Chapter 6: Prime Contractor Disparity Analysis*. The same analytical procedures were used to perform the subcontractor disparity analysis. Under a fair and equitable system of awarding subcontracts, the proportion of subcontracts and subcontract dollars awarded to M/WBEs should be in parity with the available M/WBEs in the relevant market area. If the proportions are not in parity and an underutilization exists between these proportions, the probability that the underutilization is due to chance can be determined using a statistical test of disparity. If there is a low probability that the disparity is due to chance, *Croson* states that an inference of discrimination can be made.¹

II. DISPARITY ANALYSIS OVERVIEW

As detailed in *Chapter 3: Subcontractor Utilization Analysis*, extensive efforts were undertaken to obtain subcontracting records for the City's horizontal and vertical construction, architecture and engineering, and professional services contracts. Non-professional prime contracts were not considered for a subcontract analysis because the records were not available.

¹ When conducting statistical tests, a level of confidence must be established as a gauge for the level of certainty that an observed occurrence is not due to chance. It is important to note that a 100 percent confidence level or a level of absolute certainty can never be obtained in statistics. A 95 percent confidence level is considered by the courts as an acceptable level in determining whether an inference of discrimination can be made. Thus the data analyzed here was done within the 95 percent confidence level.



The one industry where a sufficient number of subcontracts were collected to perform a statistical disparity analysis was horizontal construction. There was, however, underutilization of M/WBEs subcontracts on the vertical construction, architecture and engineering, and professional services subcontracts collected but it could not be measured statistically because there were too few records to perform the analysis. With more subcontracts and the same pattern of use, the analysis would show a statistically significant disparity for vertical construction and architecture and engineering subcontracts. When the vertical and horizontal construction subcontracts were analyzed together, there was a statistical disparity documented. The statistically significant facts can be used to support a race-based program.



III. DISPARITY ANALYSIS

A. Horizontal Construction Subcontractor Disparity Analysis: October 1, 2003 and September 30, 2007

The disparity analysis of horizontal construction subcontract dollars is depicted in Table 7.01 and Chart 7.01. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses represent 24.17 percent of the available horizontal construction firms and received 0.16 percent of the horizontal construction subcontract dollars. This underutilization is statistically significant.

Asian American Businesses represent 3.58 percent of the available horizontal construction firms and received none of the horizontal construction subcontract dollars. This underutilization is statistically significant.

Hispanic American Businesses represent 20.78 percent of the available horizontal construction firms and received 4.01 percent of the horizontal construction subcontract dollars. This underutilization is statistically significant.

Native American Businesses represent 2.11 percent of the available horizontal construction firms and received none of the horizontal construction subcontract dollars. This underutilization is not statistically significant.

Minority Business Enterprises represent 50.64 percent of the available horizontal construction firms and received 4.17 percent of the horizontal construction subcontract dollars. This underutilization is statistically significant.

Women Business Enterprises represent 16.37 percent of the available horizontal construction firms and received 17.16 percent of the horizontal construction subcontract dollars. This study does not test statistically the overutilization of women business groups.

Minority and Women Business Enterprises represent 67.01 percent of the available horizontal construction firms and received 21.33 percent of the horizontal construction subcontract dollars. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 32.99 percent of the available horizontal construction firms and received 78.67 percent of the horizontal construction subcontract dollars. This overutilization is statistically significant.



Table 7.01 Disparity Analysis: Horizontal Construction Subcontracts, October 1, 2003 to September 30, 2007

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$21,630	0.16%	24.17%	\$3,314,141	-\$3,292,511	0.01	< .05 *
Asian Americans	\$0	0.00%	3.58%	\$490,984	-\$490,984	0.00	< .05 *
Hispanic Americans	\$549,765	4.01%	20.78%	\$2,849,460	-\$2,299,695	0.19	< .05 *
Native Americans	\$0	0.00%	2.11%	\$289,330	-\$289,330	0.00	not significant
Caucasian Females	\$2,353,199	17.16%	16.37%	\$2,244,498	\$108,701	1.05	**
Caucasian Males	\$10,787,885	78.67%	32.99%	\$4,524,066	\$6,263,819	2.38	< .05 †
TOTAL	\$13,712,479	100.00%	100.00%	\$13,712,479			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	5.24%	\$718,941	-\$718,941	0.00	< .05 *
African American Males	\$21,630	0.16%	18.93%	\$2,595,201	-\$2,573,571	0.01	< .05 *
Asian American Females	\$0	0.00%	0.83%	\$113,978	-\$113,978	0.00	----
Asian American Males	\$0	0.00%	2.75%	\$377,005	-\$377,005	0.00	not significant
Hispanic American Females	\$26,521	0.19%	2.94%	\$403,308	-\$376,787	0.07	not significant
Hispanic American Males	\$523,244	3.82%	17.84%	\$2,446,152	-\$1,922,908	0.21	< .05 *
Native American Females	\$0	0.00%	0.77%	\$105,211	-\$105,211	0.00	----
Native American Males	\$0	0.00%	1.34%	\$184,119	-\$184,119	0.00	not significant
Caucasian Females	\$2,353,199	17.16%	16.37%	\$2,244,498	\$108,701	1.05	**
Caucasian Males	\$10,787,885	78.67%	32.99%	\$4,524,066	\$6,263,819	2.38	< .05 †
TOTAL	\$13,712,479	100.00%	100.00%	\$13,712,479			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$26,521	0.19%	9.78%	\$1,341,438	-\$1,314,917	0.02	< .05 *
Minority Males	\$544,874	3.97%	40.86%	\$5,602,477	-\$5,057,603	0.10	< .05 *
Caucasian Females	\$2,353,199	17.16%	16.37%	\$2,244,498	\$108,701	1.05	**
Caucasian Males	\$10,787,885	78.67%	32.99%	\$4,524,066	\$6,263,819	2.38	< .05 †
TOTAL	\$13,712,479	100.00%	100.00%	\$13,712,479			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$571,395	4.17%	50.64%	\$6,943,915	-\$6,372,520	0.08	< .05 *
Women Business Enterprises	\$2,353,199	17.16%	16.37%	\$2,244,498	\$108,701	1.05	**
Minority and Women Business Enterprises	\$2,924,594	21.33%	67.01%	\$9,188,413	-\$6,263,819	0.32	< .05 *
Caucasian Male Business Enterprises	\$10,787,885	78.67%	32.99%	\$4,524,066	\$6,263,819	2.38	< .05 †

(*) denotes a statistically significant underutilization.

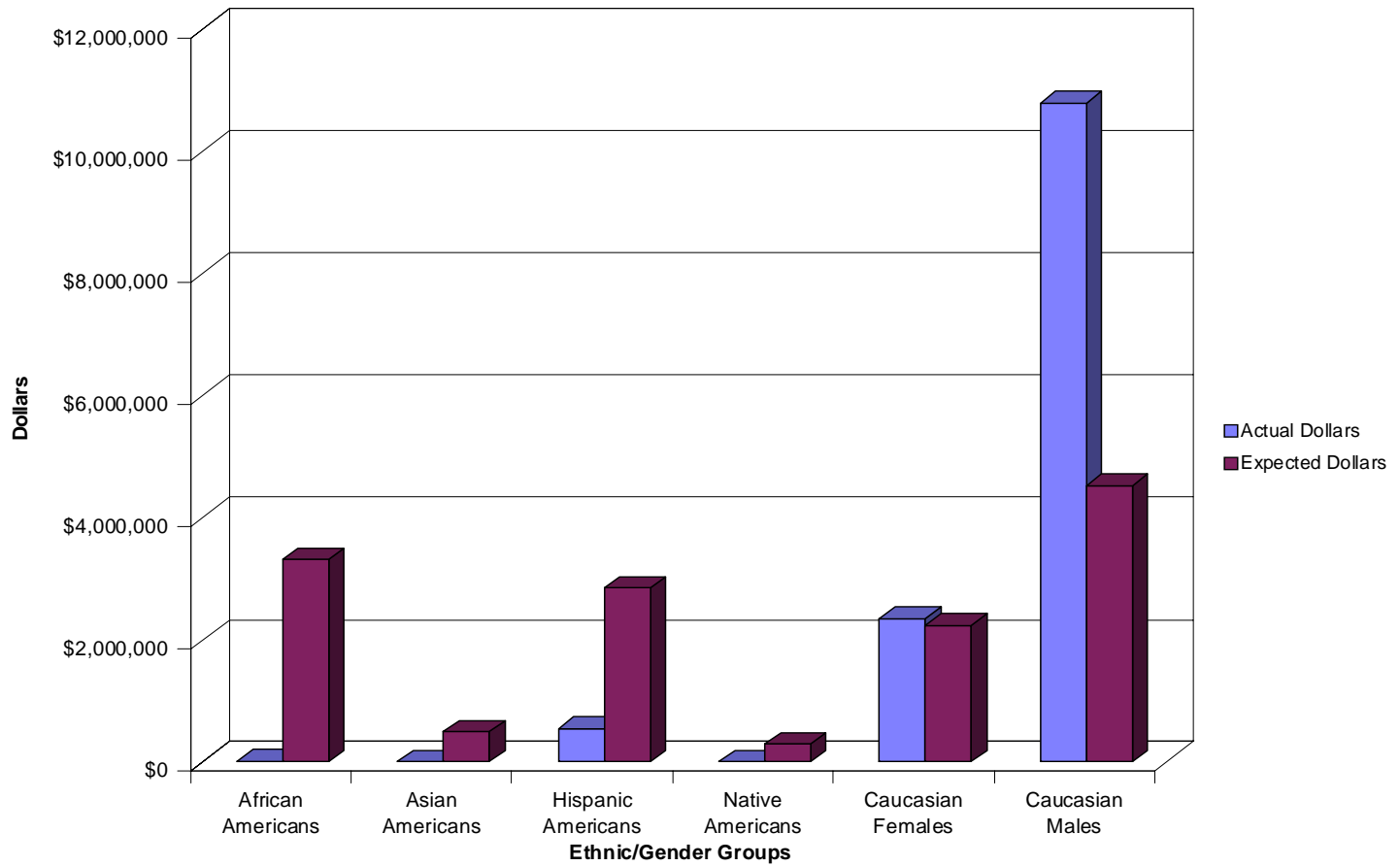
(†) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 7.01 Disparity Analysis: Horizontal Construction Subcontracts, October 1, 2003 to September 30, 2007



IV. SUBCONTRACTOR DISPARITY SUMMARY

The subcontractor disparity findings are summarized below.

As indicated in Table 7.02, horizontal construction subcontracts had a statistically significant disparity for African Americans, Asian Americans, and Hispanic Americans. Native Americans were not awarded any contracts however there were too few contracts and available firms to determine statistical significance.

**Table 7.02 Subcontractor Disparity Summary,
October 1, 2003 to September 30, 2007**

Ethnicity / Gender	Horizontal Construction Services
African Americans	Yes
Asian Americans	Yes
Hispanic Americans	Yes
Native Americans	No
Minority Business Enterprises	Yes
Women Business Enterprises	No
Minority and Women Business Enterprises	Yes

Yes = Statistically significant disparity was found
 No = Statistically significant disparity was not found



8

RECOMMENDATIONS

I. INTRODUCTION

This chapter provides race and gender specific recommendations for the groups that had a statistically significant underutilization, as well as race and gender neutral recommendations for all groups. The statistical analysis was a review of construction, architecture and engineering, professional services, and non-professional services awarded during the October 1, 2002 through September 30, 2007 study period. The race-neutral recommendations include best management practices, an analysis of the City of Arlington's (City) procurement procedures set forth in the City's Purchasing Manual¹, and a review of the City's web site.

This chapter is organized into six sections. The first is an *Introduction*, the second section, *Disparity Findings*, presents the statistical disparity analysis. A review of the City's commitment to Historically Underutilized Businesses is discussed in section three. *Race-Conscious Remedies* are provided in section four, and *Race and Gender-neutral Recommendations* in section five. Section six presents the *Administrative Recommendations*.

II. DISPARITY FINDINGS

The statistical analysis of M/WBE utilization is a key component of the Study. The objective of the analysis was to determine if M/WBE contractors were utilized at the level they were available in the City's market area. According to the Court, the statistically significant underutilization of an ethnic or gender group constitutes disparity. Race and gender-specific recommendations are proposed where a disparity was documented.

The findings are presented by ethnicity and gender within each industry and at the formal and informal thresholds. The informal threshold level was \$25,000 and under for each of the four



¹ Revised March 2004.

industries studied. The disparity analysis of the formal contracts addressed each of the four industries but was limited to contracts valued under \$500,000.

A. Prime Contracts

As depicted in Table 8.01 below, the City issued 3,898 prime contracts during the October 1, 2002 to September 30, 2007 study period. The 3,898 contracts included 614 for construction, 152 for architecture and engineering, 139 for professional services, and 2,993 for non-professional services.

The payments made by the City during the study period totaled \$225,039,584 for all 3,898 contracts. These expenditures included \$132,789,337 for construction, \$28,033,034 for architecture and engineering, \$9,239,218 for professional services, and \$54,977,995 for non-professional services.

Table 8.01 Total Prime Contracts and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Contracts	Total Dollars Expended
Construction	614	\$132,789,337
Architecture and Engineering	152	\$28,033,034
Professional Services	139	\$9,239,218
Non-Professional Services	2,993	\$54,977,995
Total Expenditures	3,898	\$225,039,584



B. Subcontracts

As depicted in Table 8.02 below, the 159 subcontracts analyzed included 114 horizontal construction, 20 vertical construction, 24 architecture and engineering, and 1 for professional services. A total of \$22,521,767 dollars were expended on the 159 subcontracts of which \$13,712,479 were for horizontal construction, \$4,550,068 were for vertical construction, \$4,256,220 for architecture and engineering, and \$3,100 for professional services subcontracts.

Table 8.02 Total Subcontract Dollars: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Subcontracts	Total Dollars Expended
Horizontal Construction	114	\$13,712,479
Vertical Construction ²	20	\$4,550,068
Architecture and Engineering ³	24	\$4,256,220
Professional Services ⁴	1	\$3,100
Total	159	\$22,521,867

² There were not sufficient vertical construction subcontracts to perform a disparity analysis.

³ There were not sufficient architecture and engineering subcontracts to perform a disparity analysis.

⁴ There were not sufficient professional services subcontracts to perform a disparity analysis.



C. Prime Contractor Disparity Findings

1. Construction Contracts

As indicated in Table 8.03, African American, Asian American, Hispanic American, and Women Business Enterprise construction prime contractors were determined to be underutilized at both the formal and formal contract levels. Native American construction contractors were only underutilized at the formal contract level.

Table 8.03 Disparity Summary: Construction Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Construction	
	Formal Contracts under \$500,000	Informal Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	Yes	Yes
Native Americans	Yes	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



2. Architecture and Engineering Contracts

As indicated in Table 8.04, African American and Hispanic American architecture and engineering prime contractors were determined to be underutilized at both the formal and informal contract levels. Asian Americans were underutilized at the informal contract level and Women Business Enterprises were determined to be underutilized at the formal contract level.

Table 8.04 Disparity Summary: Architecture and Engineering Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Architecture and Engineering	
	Formal Contracts under \$500,000	Informal Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	No
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



3. Professional Services Contracts

As indicated in Table 8.05, African American, Asian American, and Women Business Enterprise professional services prime contractors were determined to be underutilized at both the informal and formal contract levels. Native Americans were awarded too few formal professional services contracts to test the statistical significance of the groups' underutilization.

**Table 8.05 Disparity Summary: Professional Services
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Professional Services	
	Formal Contracts under \$500,000	Informal Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	No	No
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



4. Non-Professional Services Contracts

As indicated in Table 8.06 African American, Hispanic American, and Women Business Enterprise non-professional services prime contractors were determined to be underutilized at both the informal and formal contract levels. Asian American Business Enterprises were determined to be underutilized at the informal contract level.

**Table 8.06 Disparity Summary: Non-Professional Services
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Non-Professional Services	
	Formal Contracts under \$500,000	Informal Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	No	---
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.



D. Subcontractor Disparity Findings

Extensive efforts were undertaken to obtain subcontracting records for the City's horizontal and vertical construction, architecture and engineering, and professional services contracts. The City's non-professional prime contract records were not available and, thus, not considered for a subcontract analysis. However, there was only a sufficient number of horizontal construction subcontracts collected to perform a subcontractor statistical disparity analysis. The subcontractor disparity findings are summarized below.

As indicated in Table 8.07, horizontal construction subcontracts had a statistically significant disparity for African Americans, Asian Americans, and Hispanic Americans.

**Table 8.07 Subcontractor Disparity Summary,
October 1, 2003 to September 30, 2007**

Ethnicity / Gender	Horizontal Construction Services
African Americans	Yes
Asian Americans	Yes
Hispanic Americans	Yes
Native Americans	No
Minority Business Enterprises	Yes
Women Business Enterprises	No
Minority and Women Business Enterprises	Yes

Yes = Statistically significant disparity was found

No = Statistically significant disparity was not found



III. HISTORICALLY UNDERUTILIZED BUSINESS PROGRAM

The City encourages the participation of Historically Underutilized Businesses (HUBs) on its contracts. Contractors bidding on City projects are required to use reasonable and best efforts to select and employ qualified HUB subcontractors. The City recognizes the HUB certification of the State of Texas Building and Procurement Commission (TBPC) and the North Central Texas Regional Certification Agency (NCTRCA).

IV. RACE AND GENDER-CONSCIOUS REMEDIES

Mason Tillman recommends several race and gender-conscious remedies to address the findings statistically significant underutilization for M/WBEs.

A. Set Overall M/WBE Subcontracting Goals

Horizontal construction subcontracts had a statistically significant disparity for African American, Hispanic American, and Asian American business enterprises. An overall MBE subcontracting goal should be set to eliminate the documented disparity. The overall subcontracting goal should reflect the availability of the statistically significant underutilized groups. Table 8.08 below depicts the availability documented in the Availability and Disparity Study.

Table 8.08 Subcontractor Availability

Ethnicity	Availability
African American	24.17%
Hispanic American	20.78%
Asian American	3.58%

B. Establish Weighted Contract Specific Construction Subcontracting Goals

In procurements where the bidding statutes allows for the use of weighted evaluation factors, subcontracting goals should be set on the City’s horizontal construction contracts for the groups that had a statistically significant underutilization. The contract specific goals should be based on the items of work and each group’s current availability levels. Prior to advertising the solicitation, the City should review all horizontal construction contracts where



weighted evaluation factors are statutorily allowed, to determine the applicable subcontracting goals. The subcontracting goals should be stipulated in the bid documents for each project.

C. Establish Evaluation Credits

Evaluation credits should be allocated in the **architecture and engineering prime contracts** evaluation process for the formal prime contracts to groups underutilized at a statistically significant level. African American, Asian American, Hispanic American, and woman-owned prime contractors that submit proposals on architecture and engineering contracts should receive the evaluation credits.

Evaluation credits could also be incorporated in the evaluation process for the award of **professional services prime contracts**. Evaluation credits would be given to African American, Asian American, and woman-owned business prime contractors that submit proposals on a professional services contract..

Ten to fifteen percent of the evaluation credits could be comprised of such evaluation credits when the selection process involves a Request for Proposal or Requests for Qualifications. Including evaluation credits in the selection criteria can counterbalance the competitive disadvantage experienced by the underutilized groups. As a result, offsetting this disadvantage could mitigate the documented underutilization in professional services prime contracts, including architecture and engineering services prime contracts.

V. RACE AND GENDER-NEUTRAL RECOMMENDATIONS

The race and gender-neutral recommendations presented in this section apply to all of the City's prime contracts in all four industries. Application of these recommendations could address barriers encountered by minority, women and other small businesses in doing business with the City and within the market area in which it infuses contract dollars.

A. Pre-Award Recommendations

1. Expand Unbundling Policy

The City unbundles large contracts into smaller ones to provide additional opportunities for M/WBEs. While the City has implemented measures to unbundle its contracts, 24 of the City's 846 vendors received 60 percent of the 3,898 prime contracts. Given the concentration of its contract awards with a few contractors, the City should make a greater effort to unbundle its contracts to increase the number of businesses participating at both the prime contract and subcontract levels. Smaller prime contracts would result in smaller first-



tier subcontracts. The City should review all solicitations for large contracts to determine if they can be unbundled.

CRITERIA TO BE USED IN UNBUNDLING
Size and complexity of the project
Number of locations in the project
Sequencing and delivery of the work
Similarity of the goods and services procured
Availability of HUBs to perform parts of the procurement

2. Develop a Mentor/Protégé Program

The City should implement a Mentor/Protégé Program to increase the participation of HUBs on its contracts. The City could provide incentives to its prime contractors to furnish technical and business assistance to increase the capacity of small, HUB, and other minority, and woman-owned businesses to build their capacity to perform as prime contractors.

3. Establish a Direct Purchase Program for Construction Contracts

This program would reduce the amount of a construction bid subject to a bond. On procurements where the City is statutorily allowed to purchase material supplies directly from vendors, the prime contractor would bid the material and supplies, itemize the cost in their bid, and the City would purchase them directly from the vendor. For the purpose of bonding the cost of material and supplies would be subtracted from the bid, thereby reducing the amount of the contractor's bond that would be obligated for the job.

A direct purchase program can be beneficial to both the City and the prime contractors, especially HUBs. The surety bond premium would be reduced by the value of the material cost. In addition more competitive pricing should be available from the supplier because the City would make the payment directly. Savings on the direct cost of supplies would be a benefit to the City and to the contractor. The City's supply costs, which the contractors pass through in their bids, would be reduced and the contractor's cash flow requirement to pay suppliers in advance of receiving reimbursement from the City would be eliminated.

4. Virtual Plan Room

The City should consider purchasing software that would allow bidders to obtain digitized plans and specifications on the City's website. Such software could reduce the need to designate or pay for a space for a plan room and reduce the reproduction cost for



contractors.

5. Utilize Relationships with Lending Institutions

The City should leverage existing relationships with financial institutions to assist small and disadvantaged businesses to secure competitive financing and start-up funding. It could be beneficial for banks to work with the City to foster small business development through meeting its Community Reinvestment Act obligations.

6. Remove Brand Name Requirements in Solicitations

The City should refrain from specifying brand names in their solicitations in order to avoid restricting competition because the named brands may not be available to the HUB or offered at a competitive price.

7. Revise Bonding Requirements

Bonding requirements can be a significant disincentive to bidders, and a barrier to HUB bidders. Surety premiums are an indirect cost to the City which the prime contractors and subcontractors pass through in their bids. Therefore, the City should consider implementing a Surety Assistance Program for small contracts. A Surety Assistance Program could attract more bidders and thereby increase competition and reduce costs. Any revisions to the bonding provisions must comply with statutory requirements.

The bonding requirements on small contracts should be evaluated to ensure that they do not carry a disproportionately high level of coverage. On small contracts the bonding requirements should be set in relation to the nature and scope of work to be performed, while balancing liability, risk, and statutory requirements. In addition, the City should implement standard risk management provisions for all of its contracts that reflect reasonable risks.

8. Develop an Expedited Payment Program

Expedited payments should be implemented to remove the major barrier to small businesses—late payments from prime contractors. Payments to prime contractors would be made within 15 days of the City receiving an undisputed invoice and prime contractors would be required to pay their subcontractors within five days of receipt of their invoice payment. The City should also implement measures which encourage prime contractors to quickly resolve disputed invoices between subcontractor and the prime contractor.

9. Publish Informal Contracts

Informal contracts should be posted on the City's website and small businesses should be requested to express their interest in performing the small contracts. E-mail notices of



contracting opportunities should also be targeted to certified businesses providing the goods or services being solicited.

10. Conduct a HUB Campaign Outreach

There should be a comprehensive outreach campaign to promote the enhancements from the Availability and Disparity Study. Table 8.09 below lists strategies and tactics that can be used to design a broad based outreach program for HUBs.

Table 8.09 Outreach and Marketing Strategies

Strategy	Tactics
Design tagline produce banner display	<ul style="list-style-type: none"> • Develop tagline • Design banner with placement of existing logo and new tagline
Define design standards, layout, and appearance of procurement documents for the organization	<ul style="list-style-type: none"> • Revise all procurement materials to include the program logo and tagline in order to have a uniform appearance
Develop collateral print material for outreach campaign	<ul style="list-style-type: none"> • Produce brochure to reflect the project goals and objectives • Develop articles and media packets
Launch outreach campaign	<ul style="list-style-type: none"> • Distribute media packets and press releases • Place public service announcements • Pitch campaign to broadcast media
Host semi-annual contractors' open house and other networking events	<ul style="list-style-type: none"> • Plan and coordinate open house events • Send out invitations via mail, fax, and e-mail • Include procurement department in outreach events • Make informal contract opportunities available • Distribute contract forecasts and certification forms
Distribute forecasts to targeted businesses	<ul style="list-style-type: none"> • Advertise on billboards • Post forecast to website • Distribute through fax and e-mail • Advertise forecasts on billboards
Partner with agencies and organizations to disseminate program information	<ul style="list-style-type: none"> • Continue current agency partnerships • Develop local business and trade group partners



Strategy	Tactics
Conduct an annual program evaluation	<ul style="list-style-type: none"> • Establish measurable outcomes • Conduct surveys • Examine bidding history

11. Implement Good Faith Effort Requirements

The City should develop concise and detailed good faith effort requirements for its prime contractors, to ensure they are making a bonafide attempt at meeting the City’s commitment to increase the participation of HUBs’s on its contracts. Documentation of a good faith effort should include, but not be limited to, the following:

- Attendance at the pre-bid conference
- Copies of written notification sent to all HUBs that perform the type of work to be subcontracted, in sufficient time to allow the HUB to participate effectively
- Advisement to HUBs of the specific work the prime contractor intends to subcontract, that their interest in the project is being solicited, and how to obtain information for the review and inspection of the plans, specifications, and requirements of the bid
- A written statement of economically feasible portions of work selected to be performed by HUBs, including where appropriate, segmenting or combining elements of work into economically feasible units
- A statement of the efforts made to negotiate with HUBs, including the name, address, and telephone number of the HUB that was contacted; the date the negotiations took place; and a description of the information provided to the HUB regarding the plans, specifications and requirements for the portions of the work to be performed

The ability of the prime contractor to perform the work with its own work force should not relieve the contractor of the obligation to make a good faith effort to meet the HUB participation goals. The good faith effort requirements should also include penalties and sanctions for non-compliance.

12. Pay Mobilization to Subcontractors

Whenever a mobilization payment is made to a prime contractor, the subcontractor should be paid the appropriate share of the payment when percentage when directed to mobilize and prior to commencing work. Subcontractors should receive mobilization cost because project start-up costs can also be significant for a subcontractor who often has limited access to credit.



B. Post-Award Recommendations

1. Conduct Routine Contract Compliance Monitoring

Routine and rigorous contract compliance monitoring should be conducted to track the participation of HUBs listed in bids, proposals, and statements of qualification. Monthly contract compliance monitoring would also ensure that the subcontractor participation listed in bids, proposals, and statements of qualification is achieved throughout the duration of a contract. Regular compliance monitoring would verify that the prime contractors honored their subcontracting commitments during the term of the contract. Consistent contract compliance monitoring would minimize the hardships experienced by HUB businesses due to unauthorized substitutions and late payments.

The following contract compliance monitoring methods are recommended:

- Track and report subcontractor utilization in an electronic database
- Collect copies of the canceled checks written to subcontractors in order to verify payment information on a quarterly basis
- Impose penalties for failure to list or pay a subcontractor for work performed

2. Publish HUB Utilization Reports

The City should publish quarterly utilization reports. Utilization reports should present payment and award data organized by industry, department, ethnicity, gender, and certification status to measure the effectiveness of the HUB Program. Change orders and substitutions should be identified in the reports and any modifications to the listed subcontractors or the subcontract award amount should be tracked.

The utilization reports should be submitted to the City Council on a quarterly basis. The fourth quarter report should also include an assessment of program activities and recommendations for improvement. Exemplary practices and achievements in each department should also be noted in the fourth quarter report. All utilization reports should be posted on the City's website and made available to businesses by e-mail.

3. Payment Verification Program

A web-based payment verification program should be instituted. All prime payments would be posted on the City's web site weekly to inform subcontractors when the prime contractor payment was issued. The posting should be scheduled for the same day and time each weekday to simplify the time required for subcontractors to track their prime contractor's payment. Web postings should reduce the time required for the City's staff to address



subcontractors' questions regarding their prime contractor's payment.

4. Provide Debriefing Sessions for Unsuccessful Bidders

Debriefing sessions for unsuccessful bidders should be held by the project manager or the appropriate City department. These sessions could provide vital information to assist businesses to prepare more competitive submittals.

VI. ADMINISTRATIVE RECOMMENDATIONS

A. Website Enhancements

The City's website was evaluated with the goal of improving its functionality, informational content, and aesthetic for businesses wishing to contract with the City.

1. Improve Website Structure to Assist Users in Achieving Their Goals

The City's website has a site design that is well organized and a layout that is familiar and comfortable to users. The use of a Flash-animated banner does present some potential issues, which are discussed in the next recommendation. The placement of the Business link is functional for potential bidders visiting the site.

However, after following the Business link, the path becomes less clear and it does not present any further options. Users could easily scan the main content area of the page for links for information related to the Business link to no avail. The "Bid Opportunities" link is located under the "Most Requested" section which is very easy to overlook. The font is also very small, and a user might leave the page before noticing it.

There are several options for improving the experience for potential bidders, all of which involve increasing the visibility of the "Bid Opportunities" link, specifically by placing it in the areas that are most likely to be scanned first:

- One option for improving the usability of the site for potential bidders would be to include the link in a submenu under the banner
- Another option would be to move the "Most Requested" section out of the right navigation bar into the top of the main content area
- A third, although less ideal option is to move the "Bid Opportunities" link to a high position in the left navigation bar, or to a higher position in the right navigation bar. This option is the least desirable because it is highly likely that users will leave the site before they reach their goal.



2. Consider the Needs of Users with Slow Connections or Visual Disabilities

Most of the site is available right away, but the Home page banner is slow to load taking as long as ten seconds to appear, even on a broadband connection, while the rest of the page loads in about a second. These load times, while not unacceptable under broadband speeds, could pose an issue for those connecting via a dial-up connection. This could be a potential barrier to the small businesses because they would be more likely to use a slow connection than a larger business.

Also, the primary navigation on the site occurs within a Flash banner, which may be a barrier to those with visual disabilities who depend on screen readers to access the web. Screen readers are not always able to read Flash animations or access the links embedded in them, thus making the City's website unusable for this user group. Basic tests with free tools available with Windows and online showed the City's website to be largely opaque. This consideration, of course, applies equally to all pages on the site, not just prospective contractor pages.

3. Consolidate All Contractor Related Materials into a Contracting Portal

The City should create a portal where all contracting-related information is consolidated in a one-stop-shop with everything a potential bidder, especially HUBs would need to submit a correctly prepared bid for a City contract. This will help level the playing field so that a first-time bidder would not be disadvantaged compared to experienced bidders familiar with the City's web site.

4. Create Interactive Website Portal

The City should create a more interactive web interface in which prime contractors and subcontractors could upload, download, and submit compliance documentation to the Purchasing Division. The website should supplement paper or manual forms with electronic documents to the maximum extent possible. The interactive tools should include forms to allow current contractors and vendors to perform reporting and other administrative tasks. The site would serve as a management tool for both sides of the contracting relationship, keeping all parties informed. For example, the tool could allow the City to post change orders, update specifications, and notice changes in bid opening dates with automated notification. This would minimize the time and cost of direct communication to and from the City and the businesses.

The City should also consider an interactive tool to allow businesses to send comments concerning upcoming procurements and other ideas. The City could benefit from the comments from the businesses which could result in potential cost savings and increased competition.



B. Data Management Enhancements

Design a Contract Utilization Tracking Database

An enhanced contract tracking and monitoring management system is recommended to more efficiently track awards and payments to prime contractors and their subcontractors.

1. Record Subcontractor Bidders

Prime contract awards and payments are tracked in various City databases. Collection of subcontractor records needs to be tracked as well. To maintain a comprehensive subcontractor database, it should be a requirement that their bids, proposals, and statements of qualification list all subcontractors. The bid tabulations should record both the prime and its subcontractors for subcontract information should be entered into a database. The information would be both a record of bidders and a source of available businesses. Data on available businesses could be helpful in increasing the pool of certified firms and it could also serve as a source to expand the City's list of registered vendors.

The following are the minimum recommended fields to be recorded:

- Bid/Project Number
- Name and Address of Prime Contractor
- Prime Contractor Bid Amount
- Name and Address of Subcontractor
- Subcontractor Certification Status
- Service or Commodity to be Provided by each Subcontractor
- Subcontractor Bid Amount

2. Contract Utilization Database

The Lawson procurement database is not designed to track contract utilization data efficiently. A new tracking system should be designed in the form of a relational database that can administer several complex queries, customized forms, and reports. The system should be linked to the City's financial management system by a unique contract number. Tracking all subcontractors for all contracts would allow the City to obtain a more accurate assessment of its subcontractor utilization.



The system should minimally have the following modules:

- Vendor Information - which tracks all vendor contact information certification history
- Contract Management - which tracks all prime contract awards, change orders and payments
- Subcontractor Management - which tracks all subcontract awards, change orders and payments
- Customized and ad-hoc real time reporting on utilization reports for all projects





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