

CHAPTER 6.

Utilization and Disparity Analysis for City of Portland Construction Contracts

Chapter 6 presents utilization and disparity results for City construction contracts. Chapter 6 is organized in two parts:

- A. Utilization results; and
- B. Disparity analysis.

Part A reports the share of contract dollars that went to MBE/WBEs. Figure 6-1 provides the definition of “utilization” that BBC used for the study. Part B compares utilization results with the availability benchmarks introduced in Chapter 5. Those comparisons allow BBC to determine whether utilization of MBE/WBEs on City construction contracts was above or below what would be expected given the availability of MBE/WBEs for those contracts. Detailed utilization and disparity results are presented in Appendix L.

A. Utilization Results

The first half of Chapter 6 presents City construction utilization results for:

1. All contracts by M/W/ESB group;
2. Contracts included in the Good Faith Efforts program;
3. Sheltered Market Program contracts;
4. Informal contracts; and
5. Contracts not included in the Good Faith Efforts program or Sheltered Market Program.

1. All contracts by M/W/ESB group. Figure 6-2, on the next page, details utilization of all MBE/WBEs (top third of the figure), utilization of MBE/WBE-certified firms (middle third of the figure) and utilization of firms certified as Emerging Small Businesses (ESBs) (lower part of the figure). Results presented in Figure 6-2 include all contract dollars (prime contracts and first tier subcontracts) analyzed in the study for July 2004 through June 2009.

Figure 6-1. Defining and measuring “utilization”

“Utilization” of minority- and women-owned firms refers to the share of contract dollars going to those firms. BBC reports results for firms certified as MBEs and WBEs (firms certified as MBEs or WBEs through the State of Oregon in the year of the specific contract) and for all minority- and women-owned firms. BBC also examines results by racial/ethnic/gender group.

Utilization is expressed as a percentage of prime contract and subcontract *dollars*. For example, WBE utilization of 5 percent means that 5 percent of the contract dollars examined (e.g., \$5 million out of \$100 million) went to women-owned firms. Expressed another way, 5 cents of every contract dollar went to WBEs. “Prime contract dollars” are total contract dollars less the money identified as going to subcontractors.

Information concerning utilization of minority- and women-owned firms is useful on its own, but is even more instructive when compared with a benchmark. The benchmark applied in this study is for the level of utilization expected given relative availability of minority- and women-owned firms for a particular set of contracts.

Chapter 3 and Appendix C explain how utilization data were collected and analyzed.

As shown in Figure 6-2, 5.4 percent of City construction contract dollars went to WBEs.¹ MBEs received 2.9 percent of contract dollars. About three-quarters of overall MBE/WBE participation was with firms certified as MBE/WBEs by the State of Oregon. Certified MBEs comprised nearly all of the utilization of minority-owned firms. Certified WBEs accounted for about two-thirds of WBE utilization.

Figure 6-2 also examines utilization based on ESB certification. As shown, certified ESBs accounted for about 5 percent of City construction contract dollars from July 2004 through June 2009. More contract dollars went to majority-owned ESBs than minority- or women-owned ESBs.

Figure 6-2.
MBE/WBE and certified M/W/ESB prime/subcontract dollars
for City construction contracts, July 2004–June 2009

	Total	
	\$ in thousands	Percent
Certified and non-certified MBE/WBEs		
MBE		
African American-owned	\$4,332	0.5 %
Asian-Pacific American-owned	1,122	0.1
Subcontinent Asian American-owned	1,884	0.2
Hispanic American-owned	13,932	1.5
Native American-owned	<u>5,017</u>	<u>0.6</u>
Total MBE	\$26,287	2.9 %
WBE (white women-owned)	<u>48,377</u>	<u>5.4</u>
Total MBE/WBE	\$74,664	8.3 %
Majority-owned	<u>827,770</u>	<u>91.7</u>
Total	\$902,434	100.0 %
Certified MBE/WBEs		
MBE		
African American-owned	\$4,306	0.5 %
Asian-Pacific American-owned	571	0.1
Subcontinent Asian American-owned	1,697	0.2
Hispanic American-owned	13,347	1.5
Native American-owned	<u>5,012</u>	<u>0.6</u>
Total MBE certified	\$24,932	2.8 %
WBE (white women-owned)	30,764	3.4
Total MBE/WBE certified	\$55,696	6.2 %
Non-certified	<u>846,738</u>	<u>93.8</u>
Total	\$902,434	100.0 %
Certified ESBs		
Minority- or Women-owned ESB	\$18,437	2.0 %
Majority-owned ESB	<u>25,671</u>	<u>2.8</u>
Total ESB certified	\$44,108	4.9 %
Non-certified	<u>858,326</u>	<u>95.1</u>
Total	\$902,434	100.0 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.
Number of contracts/subcontracts analyzed is 2,134.
For more detail, see Figure L-2 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.

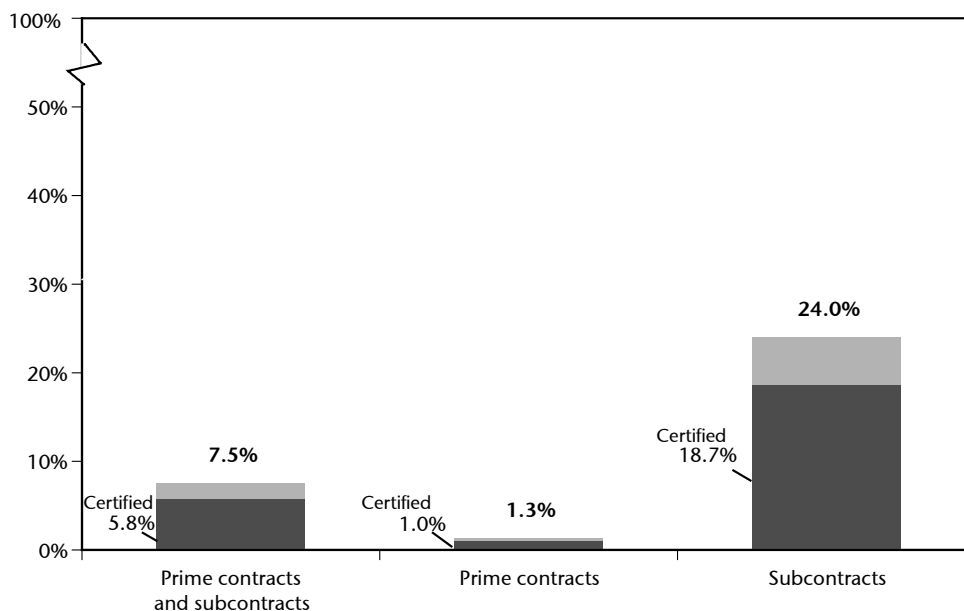
¹ As discussed in Chapter 5, “WBEs” refer to white women-owned firms in this report.

2. Contracts included in the Good Faith Efforts Program. BBC examined \$875 million of City construction contracts awarded under the Good Faith Efforts (GFE) Program during the study period. Figure 6-3 presents MBE/WBE utilization for construction contracts to which the City GFE program applied. Overall MBE/WBE utilization for GFE contracts was:

- 7.5 percent for prime contracts and subcontracts;
- 1.3 percent for prime contracts; and
- 24.0 percent for subcontracts.

Most MBE/WBE utilization on GFE contracts was with certified firms.

Figure 6-3.
MBE/WBE and certified MBE/WBE share of contract dollars for City of Portland Good Faith Efforts construction contracts awarded under the GFE program, July 2004–June 2009



Note: Number of contracts/subcontracts analyzed is 1,635 for prime contracts and subcontracts, 195 for prime contracts, and 1,440 for subcontracts. For more detail, see Figures L-5, L-6 and L-7 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.

Prime and subcontracts. Figure 6-4, on the following page, provides results by racial/ethnic/gender group. White women-owned firms (4.7%) exhibited higher utilization for City GFE construction contracts than any other MBE/WBE group.

Certified ESBs accounted for 4.3 percent of total utilization on GFE contracts. Majority-owned firms represented more than one-half of total ESB utilization.

Prime contracts. The study team analyzed 195 prime GFE contracts. WBEs accounted for 1 percentage point of the 1.3 percent MBE/WBE utilization for prime contracts. MBEs obtained less than one-half of 1 percent of total prime contract dollars. Certified ESBs received less than 1 percent of all prime contracts to which the GFE program applied.

Subcontracts. Subcontracts accounted for about \$240 million of the total value of GFE contracts. Of the 24.0 percent MBE/WBE utilization, white women- (14.6%) and Hispanic American-owned firms (5.4%) accounted for most of the participation. All other MBE/WBE groups had less than 2 percent utilization on these subcontracts.

Firms certified as ESBs accounted for 14.1 percent of total subcontract dollars on GFE contracts. Majority-owned ESBs received more than one-half of all subcontract dollars awarded to certified ESB firms (8.3% of subcontract dollars).

Figure 6-4.
MBE/WBE and certified M/W/ESB share of contract dollars for City of Portland construction contracts awarded under the GFE program, July 2004–June 2009 (thousands)

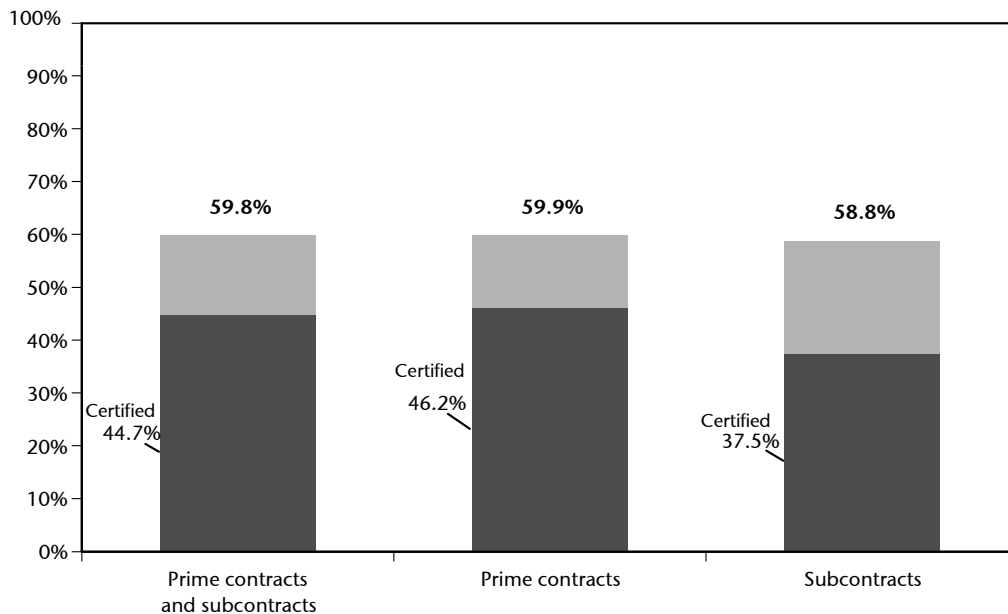
	Prime contracts and subcontracts		Prime contracts		Subcontracts	
	\$ in thousands	Percent	\$ in thousands	Percent	\$ in thousands	Percent
Certified and non-certified MBE/WBEs						
MBE						
African American-owned	\$3,659	0.4 %	\$0	0.0 %	\$3,659	1.5 %
Asian-Pacific American-owned	980	0.1	0	0.0	980	0.4
Subcontinent Asian American-owned	1,848	0.2	0	0.0	1,848	0.8
Hispanic American-owned	13,075	1.5	158	0.0	12,917	5.4
Native American-owned	<u>4,726</u>	<u>0.5</u>	<u>1,681</u>	<u>0.3</u>	<u>3,045</u>	<u>1.3</u>
Total MBE	\$24,288	2.8 %	\$1,839	0.3 %	\$22,449	9.4 %
WBE (white women-owned)	41,229	4.7	6,178	1.0	35,050	14.6
Total MBE/WBE	\$65,517	7.5 %	\$8,018	1.3 %	\$57,499	24.0 %
Majority-owned	<u>809,296</u>	<u>92.5</u>	<u>627,325</u>	<u>98.7</u>	<u>181,971</u>	<u>76.0</u>
Total	\$874,813	100.0 %	\$635,343	100.0 %	\$239,470	100.0 %
Certified MBE/WBEs						
MBEs						
African American-owned	\$3,633	0.4 %	\$0	0.0 %	\$3,633	1.5 %
Asian-Pacific American-owned	429	0.0	0	0.0	429	0.2
Subcontinent Asian American-owned	1,661	0.2	0	0.0	1,661	0.7
Hispanic American-owned	12,567	1.4	158	0.0	12,409	5.2
Native American-owned	<u>4,727</u>	<u>0.5</u>	<u>1,681</u>	<u>0.3</u>	<u>3,042</u>	<u>1.3</u>
Total MBE certified	\$23,014	2.6 %	\$1,839	0.3 %	\$21,174	8.8 %
WBE (white women-owned)	27,719	3.2	4,228	0.7	23,491	9.8
Total MBE/WBE certified	\$50,733	5.8 %	\$6,067	1.0 %	\$44,666	18.7 %
Non-certified	<u>824,080</u>	<u>94.2</u>	<u>629,276</u>	<u>99.0</u>	<u>194,804</u>	<u>81.3</u>
Total	\$874,813	100.0 %	\$635,343	100.0 %	\$239,470	100.0 %
Certified ESBs						
Minority- or women-owned ESB	\$14,955	1.7 %	\$1,077	0.2 %	\$13,878	5.8 %
Majority-owned ESB	<u>22,427</u>	<u>2.6</u>	<u>2,465</u>	<u>0.4</u>	<u>19,962</u>	<u>8.3</u>
Total ESB certified	\$37,382	4.3 %	\$3,542	0.6 %	\$33,840	14.1 %
Non-certified	<u>837,431</u>	<u>95.7</u>	<u>631,801</u>	<u>99.4</u>	<u>205,630</u>	<u>85.9</u>
Total	\$874,813	100.0 %	\$635,343	100.0 %	\$239,470	100.0 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.
Number of contracts/subcontracts analyzed is 1,635 for prime contracts and subcontracts, 195 for prime contracts, and 1,440 for subcontracts.
For more detail, see Figures L-5, L-6 and L-7 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.

3. Sheltered Market Program contracts. Of the more than \$900 million of City construction contracts examined in the study, BBC identified \$3.8 million included in the Sheltered Market Program (SMP). Figure 6-5 indicates that MBE/WBEs accounted for about 60 percent of contract dollars under the SMP for July 2004 through June 2009. MBE/WBEs received roughly the same proportion of prime contract and subcontract dollars.

Figure 6-5.
MBE/WBE and certified MBE/WBE share of contract dollars for City construction contracts in the SMP, July 2004–June 2009



Note: Number of contracts/subcontracts analyzed is 93 for prime contracts and subcontracts, 60 for prime contracts, and 33 for subcontracts. For more detail, see Figures L-11, L-12 and L-13 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.

Prime and subcontracts. Figure 6-6, on the next page, presents utilization by racial/ethnic/gender group for SMP contracts. WBEs accounted for 43 percent and MBEs received 17 percent of contract dollars awarded under the SMP. Hispanic American-owned firms (11.2%) and African American-owned firms (5.7%) received the largest portion of the MBE dollars. Utilization of other MBE groups combined was less than 1 percent.

Prime contracts. White women-owned firms received 40 percent and minority-owned firms received 20 percent of prime contract dollars awarded under the SMP. Approximately 40 percent of SMP prime contract dollars were awarded to majority-owned ESBs.

Subcontracts. Primarily because contracts were small, construction contracts awarded under the SMP involved relatively little subcontracting (less than 20 percent of contract dollars). More than half of the subcontract dollars on SMP contracts went to white women-owned firms, whereas minority-owned firms accounted for less than 4 percent of subcontract dollars. Certified firms represented most of the MBE/WBE utilization on SMP contracts.

Figure 6-6.
MBE/WBE and certified M/W/ESB contract dollars for City construction contracts in the SMP,
July 2004–June 2009

	Prime contracts and subcontracts		Prime contracts		Subcontracts	
	\$ in thousands	Percent	\$ in thousands	Percent	\$ in thousands	Percent
Certified and non-certified MBE/WBEs						
MBE						
African American-owned	\$216	5.7 %	\$216	6.9 %	\$0	0.0 %
Asian-Pacific American-owned	0	0.0	0	0.0	0	0.0
Subcontinent Asian American-owned	7	0.2	0	0.0	7	1.0
Hispanic American-owned	424	11.2	409	13.1	15	2.4
Native American-owned	<u>2</u>	<u>0.1</u>	<u>0</u>	<u>0.0</u>	<u>2</u>	<u>0.4</u>
Total MBE	\$649	17.2 %	\$625	20.0 %	\$24	3.8 %
WBE (white women-owned)	<u>1,605</u>	<u>42.5</u>	<u>1,253</u>	<u>40.0</u>	<u>353</u>	<u>55.0</u>
Total MBE/WBE	\$2,255	59.8 %	\$1,878	59.9 %	\$377	58.8 %
Majority-owned	<u>1,519</u>	<u>40.2</u>	<u>1,255</u>	<u>40.1</u>	<u>264</u>	<u>41.2</u>
Total	\$3,774	100.0 %	\$3,133	100.0 %	\$641	100.0 %
Certified MBE/WBEs						
MBEs						
African American-owned	\$216	5.7 %	\$216	6.9 %	\$0	0.0 %
Asian-Pacific American-owned	0	0.0	0	0.0	0	0.0
Subcontinent Asian American-owned	7	0.2	0	0.0	7	1.0
Hispanic American-owned	424	11.2	409	13.1	15	2.4
Native American-owned	<u>0</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>
Total MBE certified	\$647	17.1 %	\$625	20.0 %	\$22	3.4 %
WBE (white women-owned)	<u>1,041</u>	<u>27.6</u>	<u>822</u>	<u>26.2</u>	<u>219</u>	<u>34.1</u>
Total MBE/WBE certified	\$1,688	44.7 %	\$1,447	46.2 %	\$241	37.5 %
Non-certified	<u>2,086</u>	<u>55.3</u>	<u>1,686</u>	<u>53.8</u>	<u>400</u>	<u>62.5</u>
Total	\$3,774	100.0 %	\$3,133	100.0 %	\$641	100.0 %
Certified ESBs						
Minority- or women-owned ESB	\$1,938	51.3 %	\$1,747	55.8 %	\$191	29.7 %
Majority-owned ESB	<u>1,378</u>	<u>36.5</u>	<u>1,255</u>	<u>40.1</u>	<u>123</u>	<u>19.2</u>
Total ESB certified	\$3,315	87.9 %	\$3,002	95.8 %	\$314	48.9 %
Non-certified	<u>459</u>	<u>12.1</u>	<u>131</u>	<u>4.2</u>	<u>327</u>	<u>51.1</u>
Total	\$3,774	100.0 %	\$3,133	100.0 %	\$641	100.0 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.
 Number of contracts/subcontracts analyzed is 93 for prime contracts and subcontracts, 60 for prime contracts, and 33 for subcontracts.

For more detail, see Figures L-11, L-12 and L-13 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.

4. Informal contracts. BBC also examined MBE/WBE utilization on contracts awarded through the informal and emergency contracting processes. Firms participating in the SMP are the first source for City informal contracts (contracts worth \$100,000 or less). Overall MBE/WBE utilization on informal contracts was 36.7 percent for prime contracts and subcontracts. BBC did not separately analyze prime contracts and subcontracts as there were only 15 subcontracts across all 216 informal construction contracts that the City executed during the study period.

Figure 6-7 shows MBE/WBE utilization on these contracts along with the proportion of utilization from certified MBE/WBEs.

Figure 6-7.
MBE/WBE and certified MBE/WBE
contract dollars for City informal
construction contracts,
July 2004–June 2009

Note:
 Informal contracts are those less than \$100,000.
 Number of small contracts/subcontracts analyzed is 231.
 For more detail and results by group, see Figure L-8 in
 Appendix L.

Source:
 BBC Research & Consulting from data on City of Portland
 construction contracts.

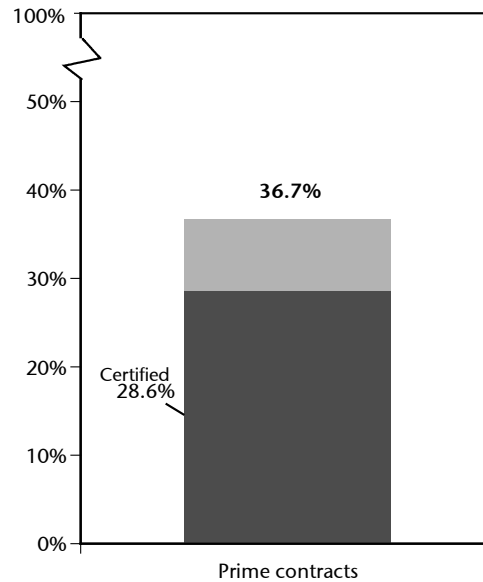


Figure 6-8 shows the detailed utilization of M/W/ESBs on all informal construction contracts.

White women-owned firms received 22.7 percent of all informal construction contract dollars. Among MBEs, Hispanic American- and African American-owned firms each received more than 5 percent of the informal contracting dollars. Almost all of the MBEs that received work were MBE-certified. More than two-thirds of the dollars received by WBEs went to certified firms.

ESBs received one-third of informal contracts. Slightly more than half of the informal contract dollars awarded to ESBs went to MBE/WBEs.

Figure 6-8.
MBE/WBE and certified M/W/ESB
contract dollars for City informal
construction contracts,
July 2004–June 2009

Note:

Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.

Informal contracts are those less than \$100,000.

Number of contracts/subcontracts analyzed is 231.

For more detail and results by group, see Figure L-8 in Appendix L.

Source:

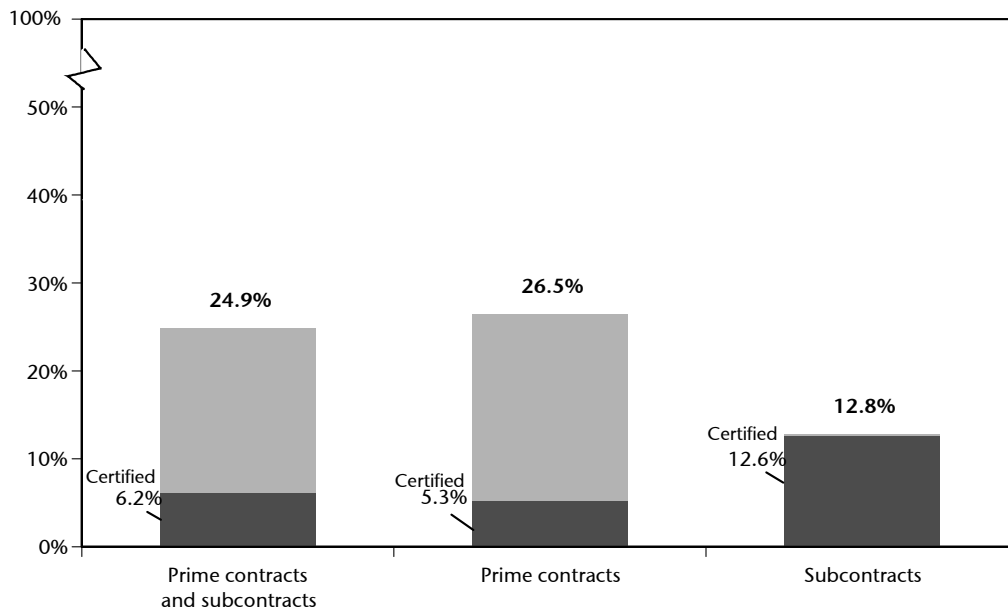
BBC Research & Consulting from data on City of Portland construction contracts.

	Prime contracts and subcontracts	
	\$ in thousands	Percent
Certified and non-certified MBE/WBEs		
MBE		
African American-owned	\$409	5.1 %
Asian-Pacific American-owned	144	1.8
Subcontinent Asian American-owned	0	0.0
Hispanic American-owned	425	5.3
Native American-owned	146	1.8
Total MBE	\$1,125	14.0 %
WBE (white women-owned)	<u>1,821</u>	<u>22.7</u>
Total MBE/WBE	\$2,946	36.7 %
Majority-owned	<u>5,080</u>	<u>63.3</u>
Total	\$8,026	100.0 %
Certified MBE/WBEs		
MBEs		
African American-owned	\$410	5.1 %
Asian-Pacific American-owned	144	1.8
Subcontinent Asian American-owned	0	0.0
Hispanic American-owned	346	4.3
Native American-owned	147	1.8
Total MBE certified	\$1,047	13.0 %
WBE (white women-owned)	<u>1,252</u>	<u>15.6</u>
Total MBE/WBE certified	\$2,299	28.6 %
Non-certified	<u>5,727</u>	<u>71.4</u>
Total	\$8,026	100.0 %
Certified ESBs		
Minority- or Women-owned ESB	\$1,439	17.9 %
Majority-owned ESB	<u>1,217</u>	<u>15.2</u>
Total ESB certified	\$2,656	33.1 %
Non-certified	<u>5,370</u>	<u>66.9</u>
Total	\$8,026	100.0 %

5. Contracts not included in the Good Faith Efforts Program or Sheltered Market Program.

Some formal contracts (contracts worth more than \$100,000) during the study period were not included in the SMP and the GFE program. These contracts included emergency contracts and contracts worth between \$100,000 and \$200,000 for which the City did not identify any substantial subcontracting opportunities. As shown in Figure 6-9, MBE/WBEs accounted for 24.9 percent of all formal construction contracting dollars not included in the GFE Program or the SMP. MBE and WBE utilization was higher for prime contracts than subcontracts.

Figure 6-9.
MBE/WBE and certified MBE/WBE contract dollars for City formal construction contracts not included in the GFE program or SMP, July 2004–June 2009



Note: Number of contracts/subcontracts analyzed is 175 for prime contracts and subcontracts, 76 for prime contracts, and 99 for subcontracts. For more detail, see Figures L-14, L-15 and L-16 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland contracts.

Results for specific MBE, WBE and ESB groups are shown in Figure 6-10. Among MBE/WBEs, most of the contract dollars went to WBEs (utilization of 23.5%). MBEs accounted for only 1.4 percent of contract dollars. About 5 percent of total dollars for these contracts went to ESBs, with most of this work going to majority-owned ESBs.

Figure 6-10.
MBE/WBE and certified M/W/ESB contract dollars for City formal construction contracts not included in the GFE program or the SMP, July 2004–June 2009

	Prime contracts and subcontracts		Prime contracts		Subcontracts	
	\$ in thousands	Percent	\$ in thousands	Percent	\$ in thousands	Percent
Certified and non-certified MBE/WBEs						
MBE						
African American-owned	\$51	0.3 %	\$0	0.0 %	\$51	2.8 %
Asian-Pacific American-owned	0	0.0	0	0.0	0	0.0
Subcontinent Asian American-owned	29	0.2	0	0.0	29	1.6
Hispanic American-owned	5	0.0	0	0.0	5	0.3
Native American-owned	140	0.9	140	1.0	0	0.0
Total MBE	\$225	1.4 %	\$140	1.0 %	\$84	4.7 %
WBE (white women-owned)	3,722	23.5	3,576	25.5	146	8.1
Total MBE/WBE	\$3,946	24.9 %	\$3,716	26.5 %	\$230	12.8 %
Majority-owned	11,875	75.1	10,309	73.5	1,566	87.2
Total	\$15,821	100.0 %	\$14,025	100.0 %	\$1,796	100.0 %
Certified MBE/WBEs						
MBEs						
African American-owned	\$51	0.3 %	\$0	0.0 %	\$51	2.8 %
Asian-Pacific American-owned	0	0.0	0	0.0	0	0.0
Subcontinent Asian American-owned	29	0.2	0	0.0	29	1.6
Hispanic American-owned	5	0.0	0	0.0	5	0.3
Native American-owned	140	0.9	140	1.0	0	0.0
Total MBE certified	\$225	1.4 %	\$140	1.0 %	\$84	4.7 %
WBE (white women-owned)	752	4.8	609	4.3	143	7.9
Total MBE/WBE certified	\$977	6.2 %	\$750	5.3 %	\$227	12.6 %
Non-certified	14,844	93.8	13,275	94.7	1,569	87.4
Total	\$15,821	100.0 %	\$14,025	100.0 %	\$1,796	100.0 %
Certified ESBs						
Minority- or Women-owned ESB	\$105	0.7 %	\$0	0.0 %	\$105	5.9 %
Majority-owned ESB	649	4.1	502	3.6	146	8.2
Total ESB certified	\$754	4.8 %	\$502	3.6 %	\$252	14.0 %
Non-certified	15,067	95.2	13,523	96.4	1,544	86.0
Total	\$15,821	100.0 %	\$14,025	100.0 %	\$1,796	100.0 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.
 Number of contracts/subcontracts analyzed is 175 for prime contracts and subcontracts, 76 for prime contracts, and 99 for subcontracts.

For more detail, see Figures L-14, L-15 and L-16 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland Good Faith Efforts construction contracts.

B. Disparity Analysis

To know whether MBE/WBE firms are “underutilized,” one must compare utilization with a benchmark that reflects the dollars those firms would be expected to receive given their availability for a particular set of procurement opportunities. Such a comparison is called a disparity analysis. Disparity analysis helps to identify whether there are disparities between utilization and availability of specific racial/ethnic/gender groups for certain types of contracts and subcontracts.

- BBC compares actual participation of an MBE/WBE group in certain contracts (expressed as a percentage of total dollars) to the percentage of work that might be expected to go to that group given its availability for that specific work (i.e., availability benchmark).
- The disparity analyses presented in this report account for differences in types, sizes, locations and timing of prime contracts and subcontracts (reflected in the availability benchmarks for specific MBE/WBE groups and sets of contracts).
- BBC creates a disparity index to easily communicate how close actual utilization comes to the availability benchmark, or whether it exceeds the benchmark. By examining the disparity index for each MBE/WBE group and set of contracts, one can directly compare results between different groups and different sets of contracts.

The second half of Chapter 6 presents disparity results for City construction contracts in eight parts:

1. Overview of disparity analysis methodology;
2. Overall construction results;
3. Contracts included in the Good Faith Efforts program;
4. Sheltered Market Program contracts;
5. Informal contracts;
6. Contracts not included in the Good Faith Efforts Program or Sheltered Market Program;
7. Analysis of statistical significance of disparities; and
8. Summary of City of Portland construction disparity results.

1. Overview of disparity analysis methodology. BBC compared actual utilization of MBE/WBEs by race/ethnicity/gender (as a percentage of contract dollars) to the share of contract dollars that might be expected to go to MBE/WBEs based on BBC’s analysis of their availability for a particular set of contracts. In the following discussion, “expected share of contract dollars” is referred to as the “utilization benchmark” or simply “availability” for particular groups and particular sets of contracts. For each MBE/WBE group and for each set of City contracts, BBC calculated a unique utilization benchmark.

Both the actual utilization and the utilization benchmark for a set of contracts are expressed as a percentage of the dollars involved in those contracts. As such, the actual utilization and the benchmark are expressed in terms that are directly comparable (e.g., 5% actual utilization compared with a benchmark of 4%). To help compare results between groups or across sets of contracts, BBC calculates a disparity index, as described in Figure 6-11.

Example of a disparity analysis table. Disparity results presented in this chapter are based on disparity tables in Appendix L. Different tables report disparity study results for different sets of contracts (e.g., construction prime contracts). Each disparity table follows the same format. Because of the number and importance of the detailed disparity tables, it is useful to first review how BBC calculated and presented results in each table.

Figure 6-12 presents an example of a disparity table from Appendix L (it is labeled Figure L-2 in Appendix L).

That disparity table pertains to combined data for all City construction prime contracts and first tier subcontracts awarded between July 2004 and June 2009. It includes dollars for prime contracts and subcontracts. Appendix L contains similar tables for different sets of contracts. (The parameters for the set of examined contracts are noted in the heading of each table.)

Utilization. Each disparity table includes the same columns and the same rows. The columns of each disparity table present the following information:

- Column (a) notes the total number of contract elements — either prime contracts, subcontracts or both — that were examined in the analysis (in Figure 6-12, 2,134 total contracts and subcontracts).
- Column (b) identifies the total dollars examined as part of the contract set. Dollars are reported in thousands. This disparity table examines contract dollars totaling more than \$900 million.
- Column (c) provides utilization dollars by racial/ethnic/gender group after reallocating any money going to firms identified as MBEs for which specific race/ethnicity information was not available. In those circumstances, the money was reallocated to each racial/ethnic group on a pro-rated basis (e.g., Because African-American-owned firms accounted for 16 percent of total allocated MBE dollars, the study team added 16 percent of unknown MBE dollars to total dollars for African American-owned firms).

Figure 6-11. Calculation of disparity indices

The disparity index provides a straightforward way of assessing how closely actual utilization of an MBE/WBE group matches what might be expected given the relative availability of that group for the work involved in a specific set of contracts (i.e., utilization benchmark). An index of “100” indicates an exact match between actual utilization and the availability for that group (also referred to as “parity”). In BBC’s disparity analysis, a disparity index is calculated for each MBE/WBE group for each set of contracts examined.

BBC calculates the disparity index for a particular group through the following formula:

$$\frac{\% \text{ actual utilization}}{\% \text{ availability}} \times 100$$

For example, if actual utilization of WBEs for a set of contracts was 2% and the availability was 10%, the index would be $2\% \div 10\%$, which is then multiplied by 100 to derive an index of 20. In this example, WBEs would have received 20 cents for every dollar expected to go to WBEs based on the availability benchmark. Smaller disparity indices indicate greater disparities.

One can directly compare the disparity index of one group to that of another group, and between sets of contracts.

- Column (d) shows relative utilization of each MBE/WBE group on a percentage basis. Each percentage in column (d) is calculated by dividing dollars awarded to a particular group in column (c) by the total dollars in the contract set, as shown in row (1) of column (c).

The rows of each disparity table (as shown in Figure 6-11) present the following information:

- Row (1) pertains to combined data for majority-, minority- and women-owned firms.
- Row (2) pertains to combined data for “MBEs” and “WBEs”, regardless of certification status.
- Row (3) pertains to data for “WBEs,” regardless of certification status.
- Row (4) pertains to data for “MBEs,” regardless of certification status.
- Rows (5) through (10) pertain to data for individual minority groups, regardless of certification status.

Combined, the utilization dollars presented in rows (5) through (10) sum to the total dollars for MBEs — the total shown in row (3) of column (c). In some cases, numbers may not sum perfectly due to rounding.

Rows (11) through (20) report analogous utilization results for firms that were certified by the State of Oregon as MBE/WBEs. The certified MBE/WBE utilization statistics in Figure 6-12 are provided as reference. BBC did not conduct availability or disparity analyses for certified MBE/WBEs alone, for the reasons described in Chapter 5.

Rows (21) through (23) report utilization results for State of Oregon certified emerging small businesses (ESBs).

Availability. Column (e) of Figure 6-12 reports availability for each racial/ethnic/gender group based on BBC’s availability analysis as applied to this set of City construction contracts. Availability results, represented as a percentage of procurement dollars, provide a benchmark against which to compare utilization for a specific group and for a particular set of contracts. BBC developed an availability estimate for each racial/ethnic/gender group following the procedures described in Chapter 5.

Difference between utilization and availability. One way of analyzing whether there is a disparity between the utilization of a particular group and its availability is to subtract the utilization result from the availability result. Column (f) of Figure 6-12 shows the percentage point difference between utilization and availability for each racial/ethnic/gender group. For example, as reported in row (2) of column (f) of Figure 6-12, MBE/WBE utilization was 2.8 percentage points above MBE/WBE availability.

Disparity indices. It is sometimes difficult to interpret absolute differences between utilization and availability, especially when utilization and availability are relatively small. Therefore, BBC also calculated a “disparity index,” which divides percentage utilization by percentage availability and multiplies the result by 100. An index of “100” means that there is “parity” between relative utilization and availability for a particular group. An index below 100, particularly one below 80 according to some courts, may indicate a substantial disparity.²

Column (g) provides the disparity index for each racial/ethnic/gender group. For example, the disparity index of 100 for African American-owned firms shown in row (5) of column (g) means that utilization of African American-owned businesses on City construction contracts was approximately equal to what would be expected given the relative availability of African American-owned firms to perform that work. The disparity index of 58 for Asian Pacific-owned firms shown in row (6) of column (g) indicates substantial underutilization for this group for this set of contracts.^{3, 4}

Results when disparity indices were very large or when availability is zero. BBC applied the following rules when disparity indices were exceedingly large or could not be calculated because no firms from the particular group were identified as available for the particular set of contracts:

- When a particular group exhibited a disparity index exceeding 200, BBC reported an index of “200+.”
- When there was no utilization and 0 percent availability for a particular group, BBC reported “parity” between utilization and availability (indicated by a disparity index of “100”).
- When a particular group exhibited 0 percent availability, but nonetheless showed utilization greater than 0 percent (which could occur for many reasons, including the fact that one or more utilized firms were out of business by the time of BBC’s availability survey), BBC reported a disparity index of “200+.”

² See e.g., *Rothe Development Corp v. U.S. Dept of Defense*, 545 F.3d 1023, 1041; *Eng’g Contractors Ass’n of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d at 914, 923 (11th Circuit 1997); *Concrete Works of Colo., Inc. v. City and County of Denver*, 36 F.3d 1513, 1524 (10th Cir. 1994). See Appendix B for additional discussion.

³ Note that all percentages in the disparity tables were rounded to the nearest tenth of 1 percent after making all calculations. Percentages correctly add and subtract, even though the rounding may make actual sums appear to differ by one tenth of 1 percent. In addition, the disparity index is derived from the detailed data for percentage utilization and availability before any rounding.

⁴ BBC’s use of the word “substantial” in describing certain disparity indices reflects the opinion of some courts that a disparity index of less than 80 reflects a substantial disparity.

Figure 6-12
MBE/WBE utilization, availability and disparity analysis for prime contracts/subcontracts
on City construction contracts, July 2004–June 2009

Firm Type	(a) Number of contracts (subcontracts)	(b) Total dollars (thousands)	(c) Total dollars after Unknown MBE allocation (thousands)*	(d) Actual utilization (column c / column c, row1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d - column e) %	(g) Disparity index (d / e) x 100
(1) All firms	2,134	\$902,434	\$902,434				
(2) MBE/WBE	788	\$74,664	\$74,664	8.3	5.5	2.8	151.6
(3) WBE	424	\$48,377	\$48,377	5.4	3.5	1.8	152.3
(4) MBE	364	\$26,287	\$26,287	2.9	1.9	1.0	150.4
(5) African American-owned	116	\$4,329	\$4,332	0.5	0.5	0.0	100.1
(6) Asian-Pacific American-owned	13	\$1,122	\$1,122	0.1	0.2	-0.1	57.7
(7) Subcontinent Asian American-owned	96	\$1,883	\$1,884	0.2	0.0	0.2	200+
(8) Hispanic American-owned	98	\$13,923	\$13,932	1.5	0.5	1.0	200+
(9) Native American-owned	40	\$5,013	\$5,017	0.6	0.7	-0.1	83.4
(10) Unknown MBE	1	\$17					
(11) MBE/WBE-certified	607	\$55,696	\$55,696	6.2			
(12) Woman-owned (certified)	265	\$30,764	\$30,764	3.4			
(13) Minority-owned (certified)	342	\$24,932	\$24,932	2.8			
(14) African American-owned (certified)	115	\$4,303	\$4,306	0.5			
(15) Asian-Pacific American-owned (certified)	11	\$571	\$571	0.1			
(16) Subcontinent Asian American-owned (certified)	91	\$1,696	\$1,697	0.2			
(17) Hispanic American-owned (certified)	86	\$13,337	\$13,347	1.5			
(18) Native American-owned (certified)	38	\$5,008	\$5,012	0.6			
(19) Unknown Minority-owned (certified)	1	\$17					
(20) Unknown MWBE (certified)	0	\$0					
(21) ESB-certified	549	\$44,108	\$44,108	4.9			
(22) Minority- or Women-owned ESB	301	\$18,437	\$18,437	2.0			
(23) Majority-owned ESB	248	\$25,671	\$25,671	2.8			

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

* Unknown MBE and Unknown MWBE (certified) were allocated to MBE subgroups proportional to the known total dollars of those groups. For example, if total dollars of African American-owned firms (column b, row 5) accounted for 25 percent of total MBE dollars (column b, row 4), then 25 percent of column b, row 11 would be added to column b, row 5 and the sum would be shown in column c, row 5.

Source: BBC Research & Consulting Disparity Analysis.

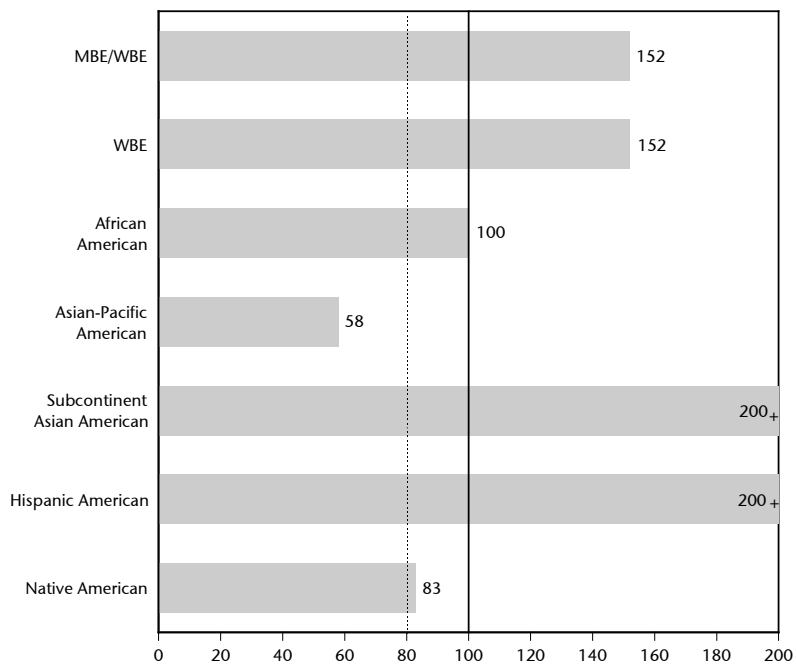
2. Overall construction results. Figure 6-13 summarizes the results of the disparity analysis for construction contracts by racial/ethnic/gender group. Overall utilization of MBE/WBEs on City construction contracts exceeded what would be expected based on their availability for City construction contracts, with a disparity index of 152.

The City’s Fair Contracting Programs, including the GFE Program and the SMP, were in place during the entire study period and were applied to a large portion of the contracts. The overall success of those programs is shown in the lack of disparities for most MBE/WBE groups. One MBE/WBE group did show a substantial disparity — Asian-Pacific American-owned firms (disparity index of 58).

Figure 6-13
Disparity indices for City
construction contracts,
July 2004–June 2009

Note:
 Number of contracts/subcontracts analyzed
 is 2,134.
 For more detail, see Figure L-2
 in Appendix L.

Source:
 BBC Research & Consulting from data on
 City of Portland construction contracts.



3. Contracts included in the Good Faith Efforts Program. Figure 6-14 on the following page presents disparity indices for City construction contracts subject to the GFE program. The top portion of Figure 6-14 presents combined results for prime contracts and subcontracts. Results for prime contracts only are presented in the middle part of the figure. Results for subcontracts only are presented in the lower part of the figure.

Prime contracts and subcontracts. Overall, there was no disparity between the utilization of MBE/WBEs on City construction contracts awarded under the GFE program. However, Asian-Pacific Americans owned firms received about one-half of the combined prime contract/subcontract dollars that they might be expected to receive based on availability (disparity index of 54). Except for this group, it appears that the City’s GFE program was effective in eliminating potential disparities in the utilization of MBE/WBEs in the contracts awarded under the program.

Prime contracts. MBE/WBEs received about three-quarters of the prime contract dollars that would be expected based on their availability for prime contracts under the GFE program (disparity index of 74). As a whole, MBEs showed a disparity index of 44 and WBEs a disparity index of 93. Substantial disparities were found for African American-, Asian-Pacific American-, Subcontinent Asian American- and Hispanic American-owned firms.

Subcontracts. For most MBE/WBE groups, the GFE program appeared to effectively encourage utilization as subcontractors. However, two groups of MBEs exhibited substantial underutilization — Asian-Pacific American-owned firms (disparity index of 71) and Native American-owned firms (disparity index of 76).

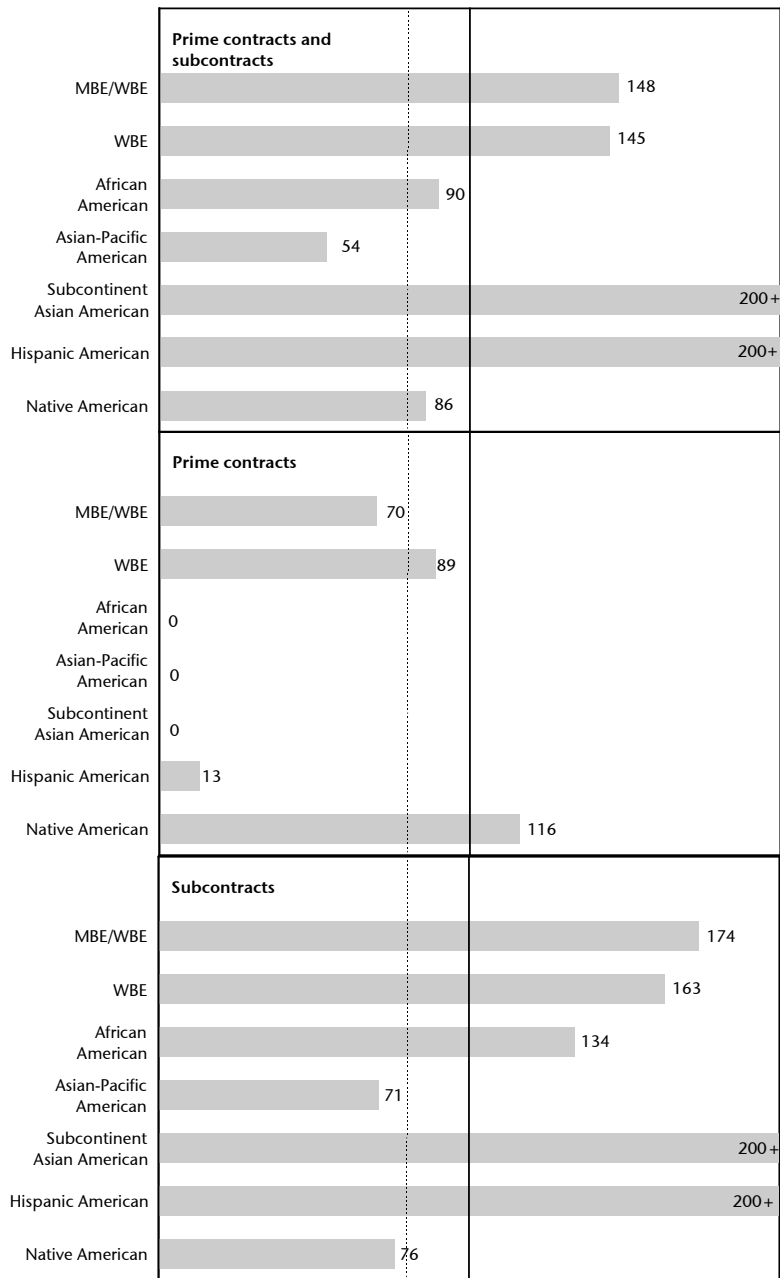
Figure 6-14.
Disparity indices for City construction contracts awarded under the GFE program, prime contracts and subcontracts, July 2004–June 2009

Note:

Number of contracts/subcontracts analyzed is 1,635 for prime contracts and subcontracts, 195 for prime contracts and 1,440 for subcontracts.

For more detail, see Figures L-5, L-6 and L-7 in Appendix L.

Source: BBC Research & Consulting from data on City of Portland construction contracts.



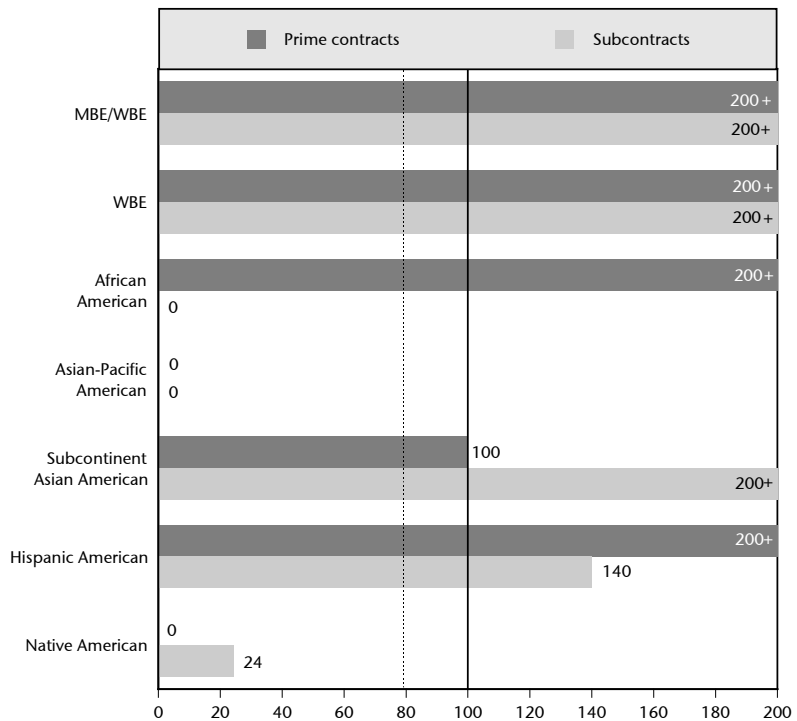
4. Sheltered Market Program contracts. Figure 6-15 shows disparity results for prime contracts (darker bars) and subcontracts (lighter bars) on contracts included in the SMP. In part because of the influence of the program, MBE/WBE utilization far exceeded availability for prime contracts included in the SMP. However, no prime contracts under the SMP appeared to go to Asian-Pacific American-owned firms or Native American-owned firms (disparity indices of 0 in Figure 6-15).

The amount of subcontracts included in SMP construction contracts (33) somewhat limits the conclusions that can be reached for individual MBE/WBE groups. However, it appears that utilization of MBE/WBEs as subcontractors exceeded what would be expected based on availability for these subcontracts (disparity index of 200+).

Figure 6-15.
Disparity indices for City
construction contracts
included in the SMP, prime
contracts and subcontracts,
July 2004–June 2009

Note:
 Number of prime contracts analyzed is 60
 and number of subcontracts analyzed is 33.
 For more detail, see Figures L-12 and L-13 in
 Appendix L.

Source:
 BBC Research & Consulting from data on
 City of Portland construction contracts.



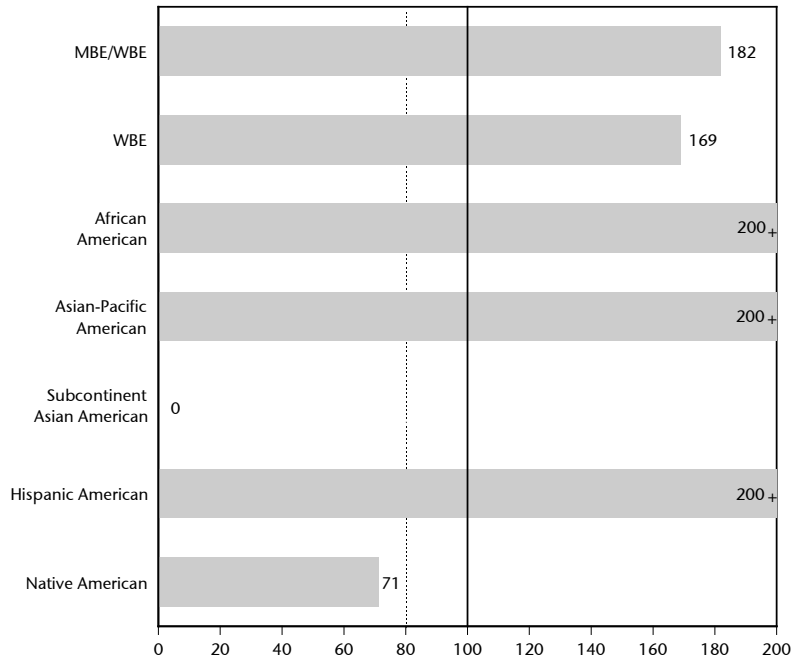
5. Informal contracts. BBC also examined disparity results for the City’s informal construction contracts (contracts under \$100,000). SMP participants are the “first source” for these contracts. As shown in Figure 6-16, overall MBE/WBE utilization exceeded availability (disparity index of 182). There were disparities in the utilization of two MBE groups — Subcontinent Asian American-owned firms (disparity index of 0) and Native American-owned firms (disparity index of 72).

Prime contracts comprise most of the dollars of informal construction contracts. Because of the small number of subcontracts involved in such contracts, BBC only examined these disparity results for prime contracts and subcontracts combined.

Figure 6-16.
Disparity indices for City
informal contracts,
July 2004–June 2009

Note:
 Number of informal contracts analyzed is 231.
 For more detail, see Figure L-8 in Appendix L.

Source:
 BBC Research & Consulting from data on City of Portland construction contracts.



6. Contracts not included in the Good Faith Efforts Program or Sheltered Market Program.

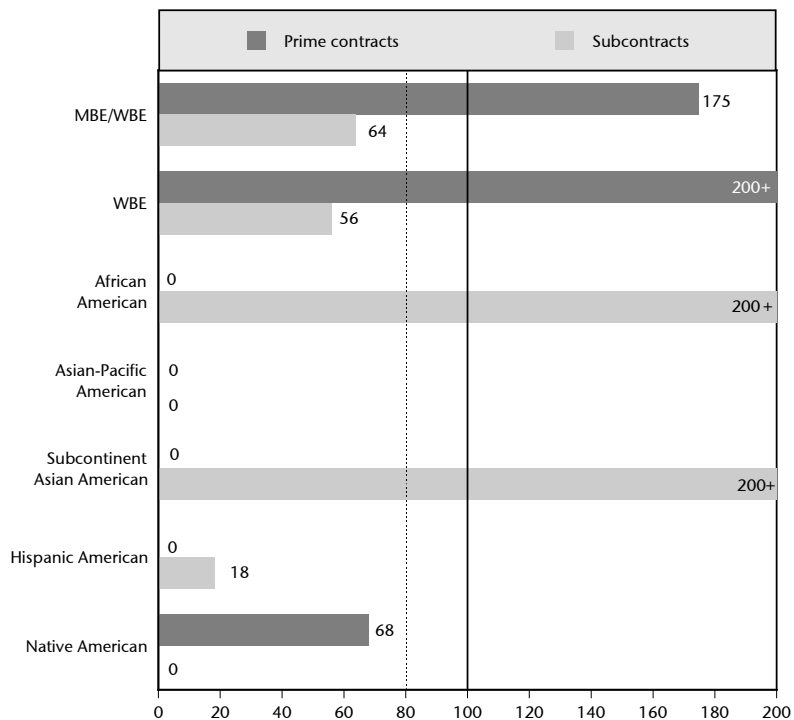
Figure 6-17 shows disparity results for the City’s formal construction contracts that were not included in the GFE program or the SMP. Utilization of WBEs as prime contractors exceeded availability. However, all MBE groups were substantially underutilized on these prime contracts.

When considering subcontracts, overall utilization of MBE/WBEs was substantially below what might be expected based on availability (disparity index of 64). All MBE/WBE groups except African American- and Subcontinent Asian-owned firms exhibited substantial disparities on these subcontracts.

Figure 6-17.
Disparity indices for City formal construction contracts not included in the GFE program or the SMP, prime contracts and subcontracts, July 2004–June 2009

Note:
Number of prime contracts analyzed is 76 and number of subcontracts analyzed is 99.
For more detail, see Figures L-15 and L-16 in Appendix L.

Source:
BBC Research & Consulting from data on City of Portland construction contracts.



7. Analysis of statistical significance of disparities. An analysis of statistical significance of observed disparities relates to the degree to which a researcher can reject random chance as an explanation for the disparity. Random chance in data sampling is the factor that researchers most often consider in determining the statistical significance of results. However, BBC did not employ sampling of availability or utilization data.

Availability. BBC attempted to contact every firm in the Portland area that Dun & Bradstreet identified as doing business within relevant subindustries (as described in Chapter 5), and thus the data could be considered a “population.” Analyzing populations, as opposed to samples, mitigates many of the concerns associated with random chance in data sampling as it relates to BBC’s availability analysis. Further discussion of these issues is presented in Figure 6-18.

Utilization. The utilization analysis also approaches a “population” of contracts. Therefore, any disparity found when comparing overall utilization with availability would be “statistically significant.” Nevertheless, BBC also used a sophisticated analytical tool to examine statistical significance of disparity results, as discussed on the next page.

Figure 6-18.
Confidence intervals for availability measures

BBC attempted to contact all Portland area firms listed under industry codes that were most related to City construction and construction-related professional services contracts. BBC successfully contacted 3,700 businesses. Because BBC attempted to contact all firms listed under relevant industry codes, rather than using a sampling method, it may be reasonable to treat the data as a population.

Should one instead treat the data as a sample, BBC computed confidence intervals around MBE/WBE representation among firms potentially available for City contracts. BBC found that, of the firms counted as potentially available for construction contracts, 19 percent were MBEs or WBEs, which is accurate within about +/-0.8 percentage points at the 95 percent confidence level. Of the firms counted as potentially available for City construction-related professional services contracts, 17 percent were MBEs or WBEs, which is accurate with about +/-0.7 percentage points at the 95 percent confidence level. By comparison, many survey results for proportions reported in the popular press are +/- 5 percentage points.

Even if one considers the availability data to be a sample, BBC's approach ensures that the sample is very large relative to the total population. BBC therefore applied a finite population correction factor when determining confidence intervals.

Monte Carlo analysis of disparities. BBC used a Monte Carlo analysis to determine whether random chance in contract or subcontract awards could explain any observed disparities in City construction contracts. BBC found that on contracts to which City MBE/WBE programs did not apply, there were too few prime contracts or subcontracts for the Monte Carlo results to be meaningful. Even when disparity indices were zero, BBC could not reject chance in contract or subcontract awards as a potential cause of the disparities because of the small number of prime contracts and subcontracts involved.

8. Summary of City of Portland construction disparity results. The City's Fair Contracting Programs (including the GFE Program and the SMP) appear to be effective in encouraging the utilization of MBE/WBEs on City construction contracts. Including utilization as prime contractors and subcontractors, 2.9 percent of City construction contract dollars from July 2004 through June 2009 went to MBEs, including firms that were not certified as either MBEs or ESBs. During the study period, 5.4 percent of City construction contract dollars went to WBEs (also including non-certified firms). Considering just ESB-certified firms, 2.0 percent of City construction contract dollars went to minority- and women-owned ESBs and 2.8 percent went to majority-owned ESBs.

Overall, the 2.9 percent utilization of MBEs on City construction contracts exceeded what might be expected based on BBC's analysis of MBE availability for that work (1.9%). The 5.4 percent utilization of WBEs on City construction contracts also exceeded WBE availability (3.5%).

Overall MBE/WBE utilization was substantially below availability in two areas in which Fair Contracting Programs did not directly apply:

- The focus of the GFE program is to encourage utilization of MBE/WBEs as subcontractors, not necessarily as prime contractors. Utilization of MBE/WBEs as prime contractors on construction contracts awarded under the GFE Program was 1.3 percent, below the 1.8 percent that might be expected based on availability (disparity index of 70).

- City programs to encourage MBE/WBE utilization as subcontractors directly applied to these contracts subcontracts on formal construction contracts not awarded under the Fair Contracting Programs. MBE/WBE utilization on subcontracts was 12.8 percent, substantially below the 20.2 percent MBE/WBE availability for these subcontracts (disparity index of 64). No

Even with application of the Fair Contracting Programs, one MBE group — Asian-Pacific American-owned firms — received a substantially smaller share of City construction contract dollars than what would be expected based on availability. BBC identified disparities for other MBE groups for certain sets of contracts under the Fair Contracting Programs, but no other groups exhibited a substantial disparity for City construction contracts overall.

Note that one must exercise caution when interpreting the existence or a lack of disparities for an MBE group for relatively small sets of prime contracts or subcontracts. Appendix L provides additional tables detailing the disparity results.