

City of Philadelphia Availability Study

Philadelphia Office of Economic Opportunity

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Executive Summary

The COVID-19 pandemic has had a particularly adverse effect on small businesses nationwide. According to the Federal Reserve, small businesses expected average revenue declines of 30 percent from 2019 to 2020, whereas in a typical year, small businesses grow by 6 percent or more. In addition to the economic fallout from the pandemic, many small businesses suffered significant property damage during a summer of civil unrest as millions of people in Philadelphia and across the country protested police brutality against Black Americans. These negative impacts were disproportionately borne by small businesses in vulnerable communities, exacerbating existing economic disparities.

The City of Philadelphia is committed to helping all people thrive and has designed policies to reflect that commitment. For 15 years, the City has required annual analyses of the distribution of City contract awards to minority- and woman-owned businesses, as well as the distribution of home loans and business loans to minority applicants and to applicants in majority-minority neighborhoods.

This Availability Study was commissioned by the City's Office of Economic Opportunity (OEO) and supplements the Annual Disparity Study that OEO has concurrently produced, which compares the availability of minority- and woman-owned businesses to do business with the City against the City's actual utilization of such businesses.

This Availability Study employed a custom census approach in order to reach businesses directly and develop a better understanding of the current small business landscape. This includes the proportion of available vendors that are Minority Business Enterprises (MBEs) and Women's Business Enterprises (WBEs), as well as the presence of various barriers that impair such businesses from securing City contracts. For this Availability Study, over 1,200 businesses completed surveys.

Based on survey results, and accounting for an analysis of publicly available business ownership data, it is estimated that the combined MBE and WBE Availability is 35 percent. These analyses also enabled Availability estimates by contract type and by MBE/WBE sub-category (see Figure ES.1 and Figure ES.2).

Figure ES.1 – Estimated Availability of Minority- and Woman-Owned Businesses for City Contracts

	PW	PPS	SSE	Total
Minority-Owned Businesses	20%	18%	17%	18%
Woman-Owned Businesses	16%	21%	16%	20%
Minority- and Woman-Owned Businesses	35%	36%	32%	35%

Figure ES.2 – Estimated Availability of Minority-Owned Businesses for City Contracts by Racial/Ethnic Subcategory

	PW	PPS	SSE	Total
Black-Owned	12%	10%	8%	10%
Asian-Owned	4%	5%	6%	5%
Hispanic-Owned	4%	3%	3%	3%
Minority-Owned	20%	18%	17%	18%

It is important to not only estimate the contemporary proportion of businesses available to the City that are minority- or woman-owned, but also to consider if discrimination exists that constrains the number or capacity of such businesses. This was accomplished in this Availability Study in three ways:

1. A business formation rate analysis, which suggests that minorities and women have lower rates than they should when controlling for other potentially explanatory variables – such as homeownership, educational attainment, and household income level.
2. A capital access analysis, which indicates that both locally and nationally, minorities and women have disparate access to personal capital, suffer worse outcomes when seeking bank loans, and are often discouraged from applying in the first place.
3. An anecdotal evidence collection, which yielded many insights on the unique challenges minority- and woman-owned businesses face in securing City contracts and sustaining their businesses.

These findings suggest a number of recommendations that are advanced in this Availability Study:

- Promote and expand the existing Mentor-Protégé program.
- Expand the Emerging Vendors program beyond Rebuild to the entire city.
- Provide feedback to businesses not selected for a City contract so they understand what they need to do to be more competitive.
- Provide various supports on how to navigate the City’s procurement system and search for bid opportunities, via regular forums with the City’s Procurement Department and a Frequently Asked Questions section on the Procurement website.
- Provide information via forums and the OEO website on the benefits and requirements for different types of certifications.

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1. Introduction

1.1. Report Purpose

This Availability Study was commissioned by the City’s Office of Economic Opportunity (OEO), and supplements the Annual Disparity Study that OEO has concurrently produced, which compares the availability of minority- and woman-owned businesses to do business with the City against the City’s actual utilization of minority- and woman-owned businesses. This report uses a combination of primary and secondary research methods to estimate the availability of minority- and woman-owned businesses to do business with the City of Philadelphia government. As a snapshot of contemporary availability and related characteristics of the business climate in the city, this Availability Study will be used to set City utilization goals and to inform other policy efforts to create a more inclusive and vibrant business climate in the city.

1.2. Meeting the Moment

The COVID-19 pandemic has had a particularly adverse effect on small businesses nationwide. According to the Federal Reserve, small businesses expected average revenue declines of 30 percent from 2019 to 2020^{1,2}, whereas in a typical year, small businesses grow by 6 percent or more.³ In addition to the economic fallout from the pandemic, many small businesses suffered significant property damage during a summer of civil unrest as millions of people in Philadelphia and across the country protested police brutality against Black Americans. These negative impacts were disproportionately borne by small businesses in vulnerable communities, exacerbating existing economic disparities.

The City of Philadelphia is committed to helping all people thrive, and has designed policies to reflect that commitment. For example, for well over a decade, the City has required annual analyses of the distribution of City contract awards to minority- and woman-owned businesses, as well as the distribution of home loans and business loans to minority applicants and applicants in majority-minority neighborhoods. The aforementioned Annual Disparity Study represents a transparent examination of the extent to which the City’s utilization of minority- and woman-owned businesses lines up with their availability in the marketplace, from which areas of disparity can be identified and contract goals and policy interventions established in response.

The City’s efforts to recover from the COVID-19 pandemic have been focused on how to recover in a way that lifts all businesses. This has driven a desire to better understand the availability of minority- and woman-owned businesses in the marketplace, in order to inform goal levels and programmatic

1 Over 9,600 national employer firms were asked their expected sales for 2020 in relation to the previous year during September and October 2020. Answer choices included an expected decrease of more than 50 percent (26 percent of firms), a decrease of 26 percent to 50 percent (27 percent of firms), a decrease of 10 percent to 25 percent (20 percent of firms), a decrease of less than 10 percent (5 percent of firms), a decrease, unsure of change (3 percent of firms), no change (9 percent of firms), and an increase (9 percent of firms). Using midpoint estimates of each answer choice range, proxying the midpoint-weighted average of the sales decrease categories for the unsure of change respondents, ESI calculated an approximate sales decrease of 30 percent during 2020 from the survey results.

2 The Federal Reserve Bank, Small Business Credit Survey: 2021 Report on Employer Firms (2021).

3 Sagesworks, Sales Growth and Net Profit Margins: Small Business Under \$5 Million, (2017).

supports. At stake is no less than the future of the city's economy and its reputation as a place where all businesses can succeed.

1.3. Report Organization

This Availability Study is organized into three main content sections.

- **Section 2** describes the methodological approach by which availability is estimated and then presents different permutations of availability estimates.
- **Section 3** elaborates on two adjacent analyses that help interpret availability results and inform OEO efforts going forward. One is an analysis of business formation rates and the other is an analysis of capital access. The relevance of these two analyses is that a standard comparison of the utilization of minority- and woman-owned businesses against their availability in the marketplace fails to account for the possibility that availability levels may be distorted by the presence of discrimination. Therefore, if utilization levels track with availability levels, but availability levels ought to be higher but for the presence of discrimination, this is relevant to a jurisdiction's efforts around goal-setting and policy interventions. Thus, this Availability Study explores whether there are race- or gender-specific differences in business formation rates and capital access.
- **Section 4** presents anecdotal evidence collected through interviews with minority- and woman-owned businesses as well as from business advocacy groups. The synthesis of these experiences and insights help shape both the interpretation of the quantitative analysis in this report and the development of appropriate recommendations.

This Availability Study concludes with a summary of key findings and recommendations.

2. Availability Estimates

2.1. Section Overview

The purpose of this section is to take multiple approaches to estimate the Availability of Minority-Owned Business Enterprises (MBEs) and Woman-Owned Business Enterprises (WBEs). This is done both by taking a custom Census approach of directly surveying businesses in the six-county region in selected industries as to their capacity and interest to do business with the City, and by looking at publicly available secondary data compiled by the US Census Bureau on the composition of ownership by race, ethnicity, and gender. These approaches yield a preliminary set of Availability estimates from which Availability levels can be established. Combined with adjacent analyses in Section 3 and anecdotal evidence collection in Section 4, those Availability levels are then presented in Section 5.

2.2. A Data-Driven Approach to Determining Relevant Geography and Industry Categories

An availability analysis must determine the relevant geography and the appropriate industry categories, both of which were done in this report using a data-driven approach. These determinations inform the remainder of the quantitative analysis used to estimate availability.

City spend for the past three fiscal years (2019, 2020, and 2021) were obtained and analyzed, yielding a distribution of spend by the geographic location of the vendor(s) used (by county) and by the industry of the good or service being procured (by two- and three-digit North American Industry Classification System (NAICS) code). While care was taken to be as inclusive as possible of all available data in estimating availability, these distributions enabled prioritization of the geographic footprint and specific industries that warranted particular focus.

The relevant geography for this Availability Study was determined to be the six-county region consisting of Philadelphia and the adjacent Montgomery, Camden, Bucks, Delaware, and Chester counties, which collectively represented 82 percent of the City's spend in the past three fiscal years (see Figure 2.1).

Figure 2.1 – Distribution of City Spend in Fiscal Years 2019, 2020, and 2021 by County Location of Vendor

County	Contract Value (\$M)	Percentage of Total Contract Value
Philadelphia, PA*	\$3,100	69.5%
Montgomery, PA*	\$176	3.9%
Camden, NJ*	\$147	3.3%
Bucks, PA*	\$113	2.5%
Delaware, PA*	\$72	1.6%
Cook, IL ⁵	\$53	1.2%
Chester, PA*	\$52	1.2%
Allegheny, PA	\$45	1.0%
Gloucester, NJ	\$37	0.8%
Fairfax, VA	\$34	0.8%
All Other Counties	\$628	14.1%
Total	\$4,458	100.0%

Source: Philadelphia Office of Economic Opportunity (2021); Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Industry categories that were prioritized in this Availability Study are shown in Figure 2.2 and Figure 2.3 below. These two- and three-digit NAICS codes represent the industry categories for which the City spent the most money on its PW, PPS, and SSE contracts.⁶

*Indicates counties included in relevant geography.

⁵ Cook County, IL which includes Chicago, was the 6th highest county by vendor spend, but the vast majority of this spend was in the form of a singular one-time contract, so it was determined that this was not illustrative of the City’s general spending patterns and thus Cook County was not included in the region designated as the relevant geography for this Availability Study.

⁶ See Appendix A for additional information on the City’s distribution of spend over the past few years.

Figure 2.2 – FY 2019 to FY 2021 Spend by Two-Digit NAICS and Contract Type

NAICS	Industry	Total (\$000s)	PPS	PW	SSE	% Total
62	Health Care and Social Assistance	\$1,969,362	\$1,968,236	\$382	\$744	44.2%
23	Construction	\$755,141	\$23,568	\$705,358	\$26,215	16.9%
81	Other Services (except Public Administration)	\$397,766	\$365,472	\$8	\$32,286	8.9%
54	Professional, Scientific, and Technical Services	\$293,698	\$270,853	\$2,807	\$20,037	6.6%
56	Administrative and Support and Waste Management and Remediation Services	\$148,459	\$24,530	\$98,710	\$25,219	3.3%
52	Finance and Insurance	\$146,195	\$140,755	\$2,144	\$34	3.3%
53	Real Estate and Rental and Leasing	\$144,970	\$136,840	\$699	\$7,236	3.3%
33	Manufacturing	\$69,609	\$9,988	\$18,237	\$41,384	1.6%
42	Wholesale Trade	\$67,522	\$1,967	\$18,699	\$46,855	1.5%
Total		\$4,457,675	\$3,263,495	\$866,354	\$318,739	100%

Source: Philadelphia Office of Economic Opportunity (2021); Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.3 – FY 2019 to FY 2021 Spend by Three-Digit NAICS and Contract Type (in Descending Order by Spend Amount)

NAICS	Industry	Total (\$000s)	PPS	PW	SSE	% Total
621	Ambulatory Health Care Services	\$1,491,947	\$1,491,126	\$77	\$744	33.5%
236	Construction of Buildings	\$426,277	\$23,318	\$393,385	\$9,574	9.6%
624	Social Assistance	\$369,133	\$368,828	\$305	\$0	8.3%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	\$359,535	\$359,535	\$0	\$0	8.1%
541	Professional, Scientific, and Technical Services	\$293,698	\$270,853	\$2,807	\$20,037	6.6%
237	Heavy and Civil Engineering Construction	\$191,607	\$0	\$181,347	\$10,259	4.3%
926	Administration of Economic Programs	\$140,458	\$137,760	\$0	\$223	3.2%
531	Real Estate	\$137,440	\$136,840	\$117	\$287	3.1%
238	Specialty Trade Contractors	\$137,257	\$250	\$130,625	\$6,381	3.1%
561	Administrative and Support Services	\$130,369	\$22,399	\$98,167	\$9,803	2.9%
Total		\$4,457,675	\$3,263,495	\$866,354	\$318,739	

Source: Philadelphia Office of Economic Opportunity (2021); Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

2.3. A Custom Census Approach to Estimating Availability

With all of the tumult in the small business community since the COVID-19 pandemic hit, it became particularly important to rely on primary research methods to understand availability. This is because secondary data sources tend to lag by two or more years, and thus represent snapshots of the small business community that has since changed significantly as many firms have seen significant reductions in capacity or have temporarily or permanently shuttered. Contacting businesses directly in the present affords a contemporary sense of availability levels, as well as of the unique challenges presently faced by minority- and woman-owned businesses, a subject that will be further explored in Section 4 of this report.

To reach businesses directly, a custom census approach was taken, in which a database of small business contact information in the relevant geography and industry categories was developed. Sources for this database included:

- The City’s Commerce Department’s contact list
- OEO’s directory of Minority-Owned Business Enterprises (MBEs) and Woman-owned Business Enterprises (WBEs)
- Publicly available directories of MBEs and WBEs from the Pennsylvania Unified Certification Program (PAUCP), New Jersey Unified Certification Program (NJUCP), and Delaware Unified Certification Program (DEUCP)⁷

An online survey was then developed and sent to everyone in the small business database in June 2021. This survey covered the following topics.⁸

- Verifying firm existence, location, and industry
- Reporting if minority-owned and/or woman-owned, and/or if certified (e.g. MBE/WBE but also other certifications)
- Confirming firm capacity and interest to do business with the City
- (for minority- and woman-owned businesses only) Identifying any barriers faced in doing business with the City or in the city

The survey was sent to 17,048 individual email addresses compiled from these lists. A total of 970 emails bounced back. The remaining 15,000 did not respond to the survey. This process yielded 1,204 survey responses, from which various availability estimates could be derived. It also yielded small business representatives willing to be interviewed as part of the anecdotal evidence collection process for this Availability Study.

Given all of the recent tumult among small businesses throughout the country in the past couple of years, it is of great benefit to have access to this primary data and contemporary research on the availability of businesses in a particular geography and in particular industries of interest to the City. This is because secondary data lags in time during which there may have been significant changes in the composition of the business community from which the City draws its vendors.

Nevertheless, it is still of benefit to analyze the available secondary data, primarily various business survey vehicles used by the US Census Bureau, such as the Survey of Business Owners, Annual Survey of Entrepreneurs, and Annual Business Survey. This is because while they represent snapshots of business characteristics from two or more years ago, they also have the benefit of a much deeper respondent pool than the surveys used in this analysis.

In the sub-sections that follow, therefore, Availability estimates and corresponding commentary rely on both results based on survey findings and results based on an analysis of publicly available secondary data. Given how difficult it is to estimate Availability, this hybrid approach marshals the best available information to do so.

⁷ Unified Certification Program (UCP) databases were utilized for Philadelphia County (PA), Bucks County (PA), Chester County (PA), Delaware County (PA), Montgomery County (PA), Burlington County (NJ), Camden County (NJ), Gloucester County (NJ), and New Castle County (DE).

⁸ See Appendix B for a copy of the survey content.

2.4. Survey Results

The survey contained 18 questions and took an average of five minutes to complete. Below are some selected compilations of survey responses. See also Appendix B for more detail on the Custom Census survey results.

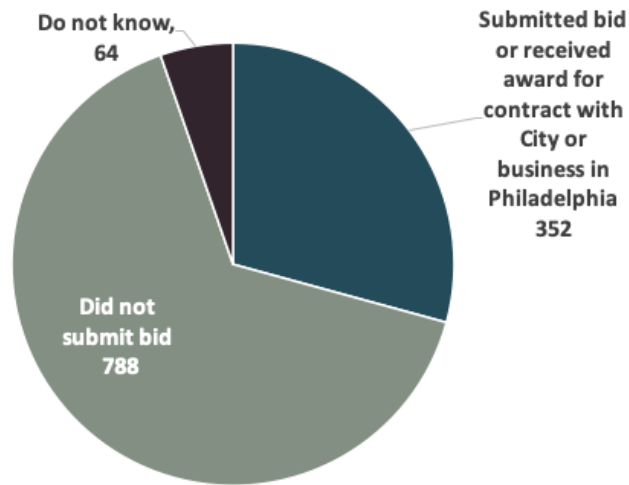
Figure 2.4 – Distribution of Survey Respondents by Three-Digit NAICS Code

NAICS Code and Description	#	%
722: Food Services and Drinking Places	174	14.5%
541: Professional, Scientific, and Technical Services	165	13.7%
446: Health and Personal Care Stores	73	6.1%
236: Construction of Buildings	65	5.4%
445: Food and Beverage Stores	65	5.4%
611: Educational Services	63	5.2%
Other Sectors	599	49.8%
Total	1,204	100.0%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Over 70 percent of the companies have not submitted bids to the City or for private contracts.

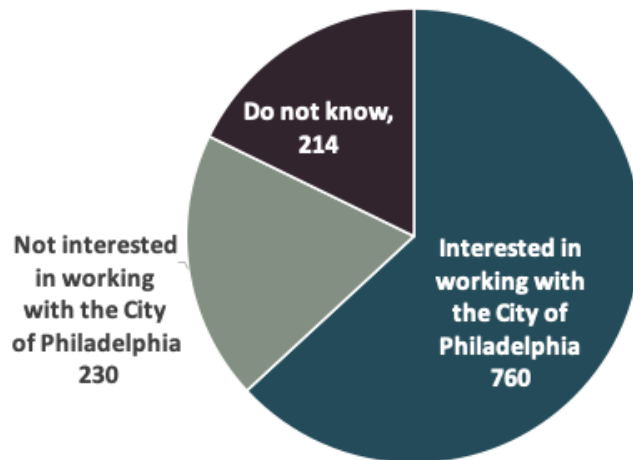
Figure 2.5 – Question #6 - During the past five years, has your company submitted a bid or received an award for any part of a contract for the City of Philadelphia or for a private sector organization located within the City of Philadelphia?



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Approximately 60 percent of the companies are interested in work with the City of Philadelphia as a prime or Subcontractor.

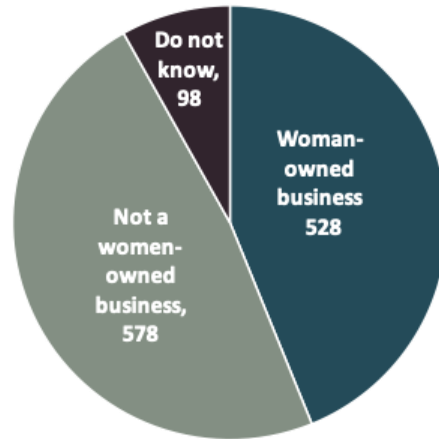
Figure 2.6 – Question #8 – Is your company interested in working with the City of Philadelphia as either a prime contractor or a sub-contractor?



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Approximately 50 percent of the companies identified themselves as a women owned business.

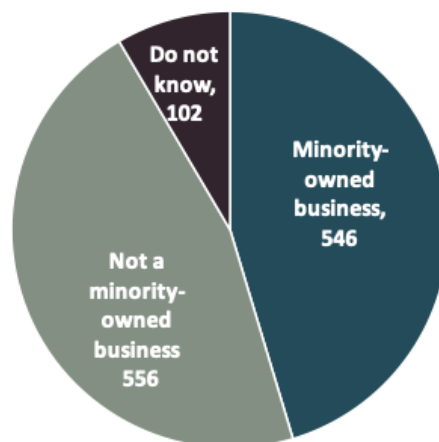
Figure 2.7 – Question #10 - Is this company a woman-owned business? (A business is defined as woman-owned if more than half—that is, 51 percent or more—of the ownership and control is by women.)



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Over 50 percent of the companies identified themselves as a minority-owned business.

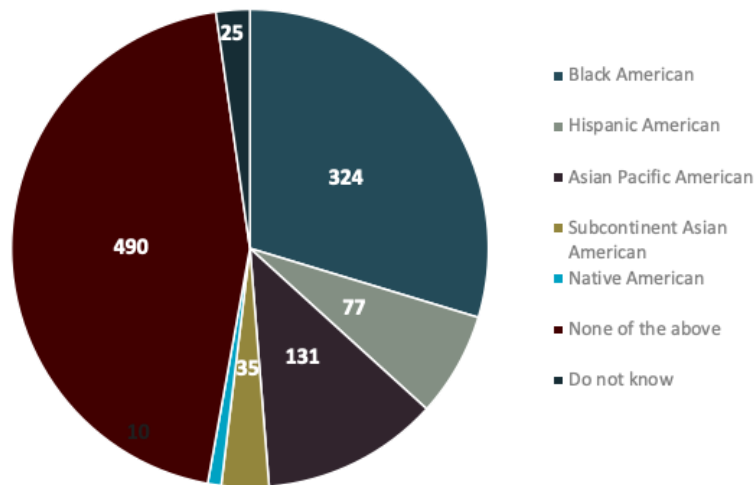
Figure 2.8 – Question #11 - Is this company a minority-owned business? (A business is defined as minority-owned if more than half—that is, 51 percent or more—of the ownership and control is by Black American, Asian American, Hispanic American, or Native American.)



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Approximately 45 percent of respondents did not select a minority group, 30% of respondents identified as Black American owned companies.

Figure 2.9 – Question #12 - Would you say that the minority group ownership of your company is mostly Black American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, or Native American? Select all that apply.



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

2.5. Availability Estimates, as Informed by Primary and Secondary Research

As noted above, the City’s understanding of Availability is enhanced by being able to look at results based on a direct and contemporary survey of area businesses, as well as results based on publicly available secondary data drawn from Census surveying that is older but more extensive in participation. This is good because together these sources of information are better than either of them in isolation. The City’s understanding of Availability is also enhanced by being able to draw from a direct and contemporary survey of area businesses that asked about the race, ethnicity, and sex of business owners, as well as about MBE and WBE certification, since it is interested in Availability from the standpoint of certified MBEs and WBEs, and also from the standpoint of minority and woman business owners.

These different data sources come together in the Availability estimates presented in this sub-section. The first set of figures below summarize overall Availability at the six-county region level for the industry categories relevant to City procurement spend:

1. Figure 2.10 is the Availability of certified MBEs and WBEs as estimated from survey results.
2. Figure 2.11 is the Availability of minority- and woman-owned businesses as estimated from survey results.

3. Figure 2.12 is the Availability of minority- and woman-owned businesses as estimated from US Census Bureau data.
4. And Figure 2.12 is the Availability of minority- and woman-owned businesses as estimated from US Census Bureau data but looking only at businesses located in the city of Philadelphia rather than the whole six-county region.

Figure 2.10 - Estimated Availability of Certified Minority-Owned Business Enterprises (MBEs) and Woman-Owned Business Enterprises (WBEs) within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
MBE	24.6%	10.4%	15.4%	25.1%
WBE	21.5%	9.5%	14.6%	22.3%
MBE + WBE	40.5%	14.4%	26.1%	35.3%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.11 - Estimated Availability of Minority- and Woman-owned businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
Minority-Owned	44.0%	37.6%	35.2%	50.2%
Woman-Owned	28.2%	42.2%	30.9%	52.0%
Minority-Owned + Woman-Owned	61.3%	51.9%	49.4%	65.1%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.12 - Estimated Availability of Minority- and Woman-owned businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on Publicly Available Secondary Data

Ownership Category	PW	PPS	SSE	Total
Minority-Owned	3.0%	12.2%	7.6%	10.1%
Woman-Owned	12.0%	22.4%	13.5%	19.7%
Minority-Owned + Woman-Owned	14.9%	34.6%	21.2%	29.8%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021); US Census Bureau (2012)

Figure 2.13 - Estimated Availability of Minority- and Woman-owned businesses within the City of Philadelphia for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on Publicly Available Secondary Data

Ownership Category	PW	PPS	SSE	Total
Minority-Owned	15.6%	24.0%	19.7%	22.1%
Woman-Owned	8.6%	24.6%	14.6%	20.8%
Minority-Owned + Woman-Owned	24.2%	48.7%	34.3%	42.9%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021); US Census Bureau (2012)

Survey results show relatively high proportions of certified MBEs and WBEs in the six-county region, relative to all businesses in the six-county region: 35 percent across all contract types, and even higher for Public Works (PW) contracts (41 percent) versus lower for Services, Supplies, and Equipment (SSE) contracts (26 percent), and Personal and Professional Services (PPS) contracts (14 percent). Independent of certification status, we see even higher proportions of minority- and woman-owned businesses: 65 percent across all contract types, and 61 percent for PW contracts.

Conversely, Availability estimates based on Census data are higher for PPS contracts (35 percent) than for PW (15 percent) with overall Availability estimated to be 30 percent. Since the City tends to draw primarily from within city boundaries for its vendors, it is useful to use Census data to estimate Availability at the city level and not just the six-county region level. At the city level, Availability estimates are higher, with overall Availability estimated to be 43 percent: 24 percent for PW contracts, 49 percent for PPS contracts, and 34 percent for SSE contracts.

The second set of figures below look at Availability for specific minority sub-categories at the six-county region level for the industry categories relevant to City procurement spend.

1. Figure 2.14 is Availability by minority sub-category as estimated from survey results.
2. Figure 2.15 is Availability by woman-owned business and minority sub-category as estimated from survey results.
3. Figure 2.16 is Availability by minority sub-category as estimated from US Census Bureau data.
4. And Figure 2.17 is Availability by minority sub-category as estimated from US Census Bureau data, but looking only at businesses located in the city of Philadelphia rather than the whole six-county region.

Figure 2.14 - Estimated Availability of Minority-Owned Businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021 by Racial/Ethnic Sub-Category, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
Black-Owned	31.6%	27.3%	24.5%	43.1%
Asian-Owned	5.5%	5.4%	6.4%	1.7%
Hispanic-Owned	7.4%	2.9%	4.5%	5.4%
Minority-Owned	44.0%	37.6%	35.2%	50.2%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.15 - Estimated Availability of Woman- and Minority-Owned Businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021 by Racial/Ethnic Sub-Category, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
Woman-Owned	28.2%	42.2%	30.9%	52.0%
Black and Woman-Owned	9.1%	22.5%	12.3%	19.2%
Asian and Woman-Owned	0.8%	4.1%	2.6%	3.4%
Hispanic and Woman-Owned	0.8%	1.7%	1.5%	1.5%
Minority- and Woman-Owned	11.0%	27.9%	16.7%	23.8%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.16 - Estimated Availability of Minority-Owned Businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021 by Racial/Ethnic Sub-Category, Based on Publicly Available Secondary Data

Ownership Category	PW	PPS	SSE	Total
Black-Owned	0.9%	2.5%	0.7%	2.0%
Asian-Owned	1.1%	7.4%	5.2%	6.0%
Hispanic-Owned	0.8%	2.0%	1.2%	1.7%
Minority-Owned	3.0%	12.2%	7.6%	10.1%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.17 - Estimated Availability of Minority-Owned Businesses within the City of Philadelphia for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021 by Racial & Ethnic Sub-Category, Based on Publicly Available Secondary Data

Ownership Category	PW	PPS	SSE	Total
Black-Owned	5.6%	11.0%	3.9%	9.5%
Asian-Owned	3.7%	9.5%	11.7%	8.5%
Hispanic-Owned	4.0%	3.1%	3.2%	3.2%
Minority-Owned	15.6%	24.0%	19.7%	22.1%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

By looking more closely at minority-owned business results, including specific racial and ethnic sub-categories, we can see some points of difference between survey results and Census-based estimates. Estimated Availability per survey results is five times estimated Availability based on Census data (50 percent vs. 10 percent), with the difference even more pronounced for PW contracts (44 percent vs. 3 percent). The vast majority of these differences lie in differences in Black-owned Availability estimates using the two approaches, as the survey returned that 43 percent of businesses in the six-county region were Black-owned whereas the Census data suggests that only 2 percent of businesses in the six-county region were Black-owned.

As indicated above, Census estimates at the city level may be more appropriate to consider, given the City’s disproportionate use of vendors located within the city. Census estimates at the city level show higher Availability levels (22 percent, vs. 10 percent at the six-county region level), but still well below levels estimated from survey results (50 percent). Once again, the differences are most pronounced with Black-owned businesses, as the survey returned that 43 percent of businesses in the six-county region were Black-owned whereas the Census data suggests that only 10 percent of businesses in the city were Black-owned.

The third and final set of figures below look at Availability at the six-county region level for the industry categories relevant to City procurement spend, and accounting for different capacity levels, as proxied by the size of the largest contract a firm has worked on in the past (whether with the City or not). The following dollar ranges for a firm’s largest contract to date were used to differentiate between lower and higher capacity levels: \$0 to \$100,000, \$100,000 to \$1 million, and \$1 million and up.

1. Figure 2.18 is the Availability of certified MBEs and WBEs of different largest contract sizes as estimated from survey results.
2. Figure 2.19 is Availability of minority- and woman-owned businesses of different largest contract sizes as estimated from survey results.

Figure 2.18 - Estimated Availability at Different Largest Contract Sizes of Certified Minority-Owned Business Enterprises (MBEs) and Woman-Owned Business Enterprises (WBEs) within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
MBE <\$100,000 in 6 County Region	1.7%	1.4%	4.0%	5.8%
MBE \$100,000 to \$1 million in 6 County Region	10.1%	3.6%	3.7%	15.2%
MBE >\$1 million in 6 County Region	9.9%	0.5%	2.4%	0.0%
WBE <\$100,000 in 6 County Region	3.0%	2.5%	5.2%	9.7%
WBE \$100,000 to \$1 million in 6 County Region	8.8%	2.8%	4.3%	10.5%
WBE >\$1 million in 6 County Region	7.0%	0.6%	2.3%	0.0%
MBE + WBE <\$100,000 in 6 County Region	3.9%	3.2%	8.2%	10.5%
MBE + WBE \$100,000 to \$1 million in 6 County Region	17.5%	4.9%	7.0%	19.7%
MBE + WBE >\$1 million in 6 County Region	15.0%	1.0%	4.4%	0.0%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 2.19 - Estimated Availability at Different Largest Contract Sizes of Minority- and Woman-Owned Businesses within the Philadelphia Six-County Region for Industry Categories Relevant to the City of Philadelphia’s Procurement Spending from FY 2019 to FY 2021, Based on ESI/Milligan Summer 2021 Survey

Ownership Category	PW	PPS	SSE	Total
Minority-Owned <\$100,000 in 6 County Region	10.1%	5.7%	8.2%	9.0%
Minority-Owned \$100,000 to \$1 million in 6 County Region	15.6%	3.9%	5.5%	16.4%
Minority-Owned >\$1 million in 6 County Region	11.3%	0.6%	2.6%	0.0%
Woman-owned <\$100,000 in 6 County Region	3.6%	4.3%	9.0%	13.8%
Woman-owned \$100,000 to \$1 million in 6 County Region	12.0%	3.6%	5.8%	13.5%
Woman-owned >\$1 million in 6 County Region	8.4%	0.7%	2.9%	0.0%
Minority-Owned + Woman-owned <\$100,000 in 6 County Region	12.3%	7.9%	12.6%	14.5%
Minority-Owned + Woman-owned \$100,000 to \$1 million in 6 County Region	24.3%	5.5%	9.3%	21.4%
Minority-Owned + Woman-owned >\$1 million in 6 County Region	16.3%	1.2%	4.7%	0.0%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

These last two figures provide an indication of the distribution of Availability by business capacity, which cannot as easily be determined using publicly available Census data. Specifically, the question about the largest contract size gives an indication of capacity from which appropriate goal-setting can occur, because it calibrates not just Availability proportions within an industry but also accounts for what scale of work a business can operate at.

However, interpreting these figures is impaired by low and uneven survey response rates. The vast majority of survey respondents did not provide a contract dollar range, and that proportion was even higher for minority-owned businesses. Thus, the subset of survey respondents that did answer this question with a contract dollar range cannot be taken as a legitimate proxy for the whole group, and it is conjectured therefore that Availability at the higher contract dollar ranges is much lower, since it is assumed that the majority of those who chose not to answer this question is on the smaller side.

2.6. Beyond Availability

But these availability estimates, while informative to OEO in determining appropriate goal levels and prioritizing policy interventions, do not provide the complete picture of where disparity may exist. That is because it is possible that the presence of discrimination is artificially lowering availability levels, so additional exploration is warranted to determine whether and where such discrimination exists. This is the purpose of the ensuing section, which considers business formation rates and capital access.

3. Adjacent Analyses

3.1. Section Overview

The purpose of this section is to take a closer look at a couple of other analyses that are necessary to properly frame the Availability estimates presented in this report. That is because Availability by itself is insufficient to guide whether race- and gender-specific goals are appropriate. Availability by itself considers proportions of the current pool of businesses available to the City, which provides guidance as to what appropriate Utilization levels ought to be and therefore at what level goals should be set. But if the composition of the current pool of businesses available to the City is itself skewed by the presence of discrimination, then the resulting Availability levels are a poor guide for goal levels. For example, if historic Utilization for a particular racial or ethnic category in a particular industry is 2 percent, and Availability for that racial/ethnic category and that industry is estimated to be 2 percent, one might infer that there is no Disparity and therefore no need for a race- or gender-specific goal. But if it seems unlikely that Availability for that racial/ethnic category and that industry should be as low as 2 percent, and that it is because discrimination is preventing it from being higher, then it is important to provide substantiation of those differences, because if they exist then race- or gender-specific goals are in fact warranted.

This section looks at two specific sets of analyses that are common to Disparity Studies, which are business formation analyses and capital access analyses. In each case, evidence is marshaled to suggest the existence of discrimination, which then creates an uneven environment and therefore skews present Availability levels. If there are fundamentally different business formation rates by race and ethnicity, even when controlling for potentially explanatory forces besides discrimination, then it is likely that that discrimination is preventing Availability levels from being higher. Similarly, if there are fundamentally different capital access rates by race and ethnicity, then that too leads to Availability levels that are lower than they should be. The analyses in this section seem to indicate that in both cases, this is likely to be true, which creates another justification for the use of race- and gender-specific goals.

3.2. Business Formation Analysis

An important adjacent analysis in an Availability Study is a business formation analysis. This is because a stand-alone Availability Study only accounts for the present distribution of ready, willing, and able businesses in the relevant geography for a jurisdiction. Such an analysis does not account for the possibility that the existence of discrimination has artificially lowered the proportion of businesses that are owned and operated by people of color or women. A business formation analysis is one way to determine if there are systemic differences in business formation rates, which if they exist would indicate the possibility of the presence of discrimination in causing availability levels to be lower than they should be, and are thus an important supplement to an Availability Study to appropriately interpret availability estimates.

The established national literature on this subject is conclusive about the differences in business formation and survival rates by race, ethnicity, and gender. In a recent study, it was found that Black-

owned start-up businesses were significantly different in business size than white-owned start-ups, with fully two-thirds of the difference being explained by either business owner credit score or business owner net worth.⁷ This will be a subject that is delved into in more detail in the next sub-section, on capital access differences, but it speaks to broad inequalities in household wealth and household financial literacy which resulted in a racially disparate effect on business formation and survival rates.

Analysis of this data set yielded the following insights regarding statistically significant drivers of self-employment rates:

- As noted, negative coefficients indicate lower probabilities of self-employment, when controlling for other potentially explanatory variables such as homeownership, income level, and educational attainment. It is therefore notable that all racial, ethnic, and gender categories had negative coefficients, with the largest negative coefficients belonging to Black and Female people. Note also that all of these findings are statistically significant.
- Hispanics were the racial, ethnic, and gender category that had the smallest difference between the comparison group in self-employment rates (i.e. relative to other racial, ethnic, and gender categories, they were more likely to be self-employed). And, speaking a language other than English in the home actually had a positive coefficient, meaning that people for whom that is true are more likely than the comparison group to be self-employed.
- The coefficient associated with income level is positive but very small, while the coefficients associated with various educational attainment levels are either positive but small or negative but small. This suggests that self-employment rates are largely steady across income levels and educational attainment levels.
- Homeownership appears to be strongly correlated with self-employment, with a far greater likelihood of self-employment relative to the comparison group. The relationship between homeownership and self-employment is explored further in the ensuing section on capital access.
- This regression analysis attempted to control for potentially explanatory variables for self-employment, such as income level, educational attainment level, and homeownership. The resulting coefficients suggest that it is not a fully level playing field for women and people of color, as evidence by lower probabilities of self-employment than their comparison group. The next section, on capital access, explores one possible reason for those lower probabilities.

3.3. Capital Access Analysis

As with differences in business formation rates, differences in capital access exist and are a drag on Availability levels. This can be seen in the existing national literature as well as in a closer look at Philadelphia-specific data.

A recent seminal study on capital access across the US yielded the following stark conclusions, which are consistent with the prevailing literature on this topic:

- Black owners have access to half as much in personal equity and as a result contribute less to their businesses relative to white owners. In addition, black owners have as a limited pool of inside equity (i.e. from family and friends) to draw upon, that is a fifth of what white owners can draw.
- Black owners are three times more likely than white owners to not even apply for loans at all due to the assumption that they will be rejected.
- Isolating potential explanations for these differences, it appears that they are a combination of disparate capital access at the point of seeking business funding, as well as systemic differences in household wealth and household financial literacy, a point that was mentioned in the previous sub-section.

In Philadelphia, publicly available lending data enables a very granular sense of capital access. Unfortunately, these data also suggest that racial disparities continue to exist:

- Majority-minority parts of the city received a disproportionately low share of business loans, with business loan penetration generally declining when comparing more heavily minority neighborhoods.
- Black and Hispanic landlords received a disproportionately low share of prime loans and a disproportionately high share of sub-prime loans, as well as much higher denial rates.
- There remain persistent racial differences in home lending, an important aspect of business success and business capital access, in that Black and Hispanic applicants receive a disproportionately low share of prime loans and a disproportionately high share of sub-prime loans and are subject to higher denial rates.

4. Anecdotal Evidence

4.1. Section Overview

Anecdotal evidence is a long-accepted form of substantiation for the existence of discrimination and therefore justification of race- and gender-specific goals. The custom census approach described in Section 2 therefore not only represents a direct and contemporary look at the composition and characteristics of the small business community available to the City, but it also enables direct and nuanced engagement with individual businesses. Specifically, survey recipients were asked to conclude their survey response by indicating their willingness to be followed up with for a brief interview to discuss business conditions in the city and doing business with the City. Nearly 500 individual survey respondents expressed their willingness to be followed up with, and 41 individual business owners were contacted and interviewed. The insights they shared form the basis of the content for this section, and greatly influence the recommendations offered in Section 5.3.

4.2. Methodology

Using data from the surveys, the team completed 41 interviews in June and July with companies that 1) identified as MBEs and WBEs, 2) were in industries in which the City has historical spending, and 3) expressed a willingness to participate in a follow-up interview. The interviewees included 18 firms identified as minority-Owned, 10 firms identified as woman-Owned, and 13 firms identified as both minority- and woman-Owned. Some businesses interviewed hold multiple certifications and 9 businesses were not certified but potentially eligible to be certified.

Figure 4.2 - Small Businesses Interviewed for Anecdotal Evidence Collection by Certification Status

Category	Minority	Woman	Minority and Woman
MBE Certified	14		8
WBE Certified		8	8
DBE Certified	9	6	2
Not Certified (MBE, WBE, or DBE)	4	2	3
Local Business Enterprise (LBE)		1	
Veteran (VSOB)	1		

Source: Milligan Consulting (2021)

Additionally, the interviewees included a mixture of prime contractors, subcontractors, some who work as both primes and subcontractors, as well as firms who either have not bid or were not awarded a bid in the past five years. The average contract size for prime contractors was over \$900,000 and the average contract size for subcontracts was over \$300,000.

Figure 4.3 - Small Businesses Interviewed for Anecdotal Evidence Collection by Contractor Level

Category	MBE	WBE	MWBE
Prime Contractor	6	2	4
Subcontractor	2	3	2
Both Prime and Subcontractor	5	3	2
Have not Bid/No Bid awarded	3		7

Source: Milligan Consulting (2021)

4.3. Summary of Anecdotal Survey Respondents

The interviews included discussions about interviewees' perceptions of and experiences with contracting and doing businesses with the City of Philadelphia. None of the interviewees stated that they had difficulty securing financing for their businesses. In other areas, business owners and managers shared a variety of experiences and perceptions which have been categorized into the seven categories below. The following provides a summation and highlights of themes from the survey results.

Bid opportunities and bid awards

Respondents expressed frustration with the bid process, which was described as onerous and confusing, and often the thought of engaging in the process deterred some of them from pursuing. The requirements are often complicated, time-consuming, and offer a low percentage of winning versus the effort to pursue. In addition, the perception is that the City has a preference for larger businesses that were more established with better connections that presented a barrier of entry for smaller businesses with no track record of working for the City or any government entity.

Connecting with and working with prime contractors

Respondents have indicated that it has been challenging to win work as a small firm compared to some of the larger firms that compete for the same technical work. The view is that prime contractors have established relationships with select subcontractors and utilize the same sub-contractors for various work. It was also noted that if subcontractors were selected to a team and they win the bid, it was difficult getting work or meaningful work in accordance with the contract.

Payment on invoices from City or from prime contractor takes too long

Respondent indicated they were skeptical of the City's ability to pay invoices. Indicating the on-time payment is very challenging as cash flow is crucial to daily operations of a small business.

Business location

Some respondents expressed their limitations of winning bids because their business is not located in Pennsylvania and the bid requirements include having employees who are located in Philadelphia or the Commonwealth.

Other respondents have expressed frustrations with having a full-time office in the city, paying city taxes, and not being selected as a prime or subcontractor. The sentiment is that it doesn't pay to keep a Local Business Entity (LBE) certification and pay city taxes if the City will choose a larger out-of-state company as a prime over an established local business.

Bid requirements, including bonding and insurance

Respondents noted a lack of knowledge of where and when acquiring the bond falls in the award process. There was also the barrier of cost and insurance required for certain bids.

4.4. Technical assistance or employee issues

Respondents reported difficulty with various issues such as finding qualified employees since the COVID-19 pandemic, assistance with securing City of Philadelphia tax compliance, and getting licenses for construction related jobs. They also mentioned difficulty with the zoning and licensing process.

4.5. MBE and WBE Certification

Respondents questioned if MBE and WBE certification was worth pursuing and helpful in securing contracts. They also mentioned have problems understanding the certification process.

4.6. Recommendations for improving contracting opportunities

Some respondents asked for the City to provide more networking opportunities between subcontractors and primes, preferably one-on-one so they can understand how subcontractors are chosen and how they can better promote their qualifications. They also indicated that they would like more access to technical assistance to help with growing their business, bidding, and learning how to win contracts with the City.

5. Conclusion

5.1. Summary of Availability Estimates

As noted above, estimating Availability is notoriously difficult. Determining whether a business has the capacity, interest, and preparation to do business with the City on a particular contract of a particular size in a particular industry is fraught with both the challenge of parsing availability at such a granular level and the nuance of definitively evaluating such characteristics as “ready,” “willing,” and “able.” Because of this, multiple methods should always be employed, since each has both benefits and drawbacks while together they yield more guidance than any one method could on its own.

To arrive at the Availability estimates in this sub-section, we looked at survey results – which represent direct contact with businesses in real-time – but also represent a very small subset of the overall business community available to the City. We also looked at publicly available secondary data from the US Census Bureau, which is drawn from a far bigger sample size, but which does not directly speak to the notion of “ready,” “willing,” or “able.” Finally, we tried to account for nuances and insights from the extensive anecdotal evidence that was made possible by directly surveying individual businesses. The figures below are a compilation of all of these sources and can be incorporated by OEO into goal-setting at a citywide and individual contract level.

Figure 5.1 – Estimated Availability of Minority- and Woman-owned businesses for City Contracts

	PW	PPS	SSE	Total
Minority-Owned Businesses	20%	18%	17%	18%
Woman-Owned businesses	16%	21%	16%	20%
Minority- and Woman-Owned businesses	35%	36%	32%	35%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 5.2 – Estimated Availability of Minority-Owned Businesses for City Contracts by Racial & Ethnic Sub-Category

	PW	PPS	SSE	Total
Black-Owned	12%	10%	8%	10%
Asian-Owned	4%	5%	6%	5%
Hispanic-Owned	4%	3%	3%	3%
Minority-Owned	20%	18%	17%	18%

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure 5.3 – Estimated Availability of Minority- and Woman-owned businesses for City Contracts, by City Contract Size

	PW	PPS	SSE	Total
<\$100,000	~1.25x of estimates provided above			
\$100,000-\$1 million	estimates provided above			
>\$1 million	~0.80x of estimates provided above			

Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Even with all of these sources at our disposal, Availability estimates remain a work in progress. Yet they are unequivocally based on more extensive and contemporary information than past attempts to estimate Availability. Thus, they are useful for the City to guide the setting of overall goals as well as to influence the setting of contract-specific goals.

5.2. Summary of Available Evidence

As noted above, Availability levels are just one aspect of identifying discriminatory conditions that warrant race- and gender-specific goals. Discrimination, in addition to yielding Utilization levels that trail Availability levels, can also have the effect of reducing Availability levels.

This can occur if business formation rates are systemically different across racial, ethnic, and gender categories, thus reducing the number of businesses owned and operated by minorities and women. This has been demonstrated through the analyses and literature review presented in Section 3.2. Namely, that minority- and woman-owned business formation rates lag that of white men, even when adjusting for other potentially explanatory factors. Hence, race- and gender-specific goals may be warranted independent of an analysis Utilization versus Availability, because the business formation analysis suggests the presence of discriminatory forces that artificially lower Availability levels of minority- and woman-owned businesses. This suggests the need for the City to remedy this disparity, including using race- and gender-specific goals in City contracts.

Similarly, this can also occur if capital access rates vary by race, ethnicity, and gender, thus impairing some groups' ability to form, sustain, and grow their new businesses. This has been demonstrated through the analyses and literature review presented in Section 3.3. Namely, that minority- and woman-owned businesses have less capital access in the form of higher denial rates, fewer loans, higher-priced loans, and an overall climate that discourages even applying for financing in the first place. This has the effect of artificially lowering Availability levels of minority- and woman-owned businesses, which may justify the City taking action to remedy this disparity, including setting race- and gender-specific goals in City contracts.

The results from both of these analyses are validated by the experience of businesses throughout the region that agreed to be interviewed as part of this work. The collection of the anecdotal evidence represented by their testimonies adds confirmation and nuance to the findings throughout this report,

by expressing the existence of racial, ethnic, and gender barriers in doing business in the city and with the City.

All of this information is a useful supplement to the Availability analyses in determining future action by OEO to advance equitable economic opportunity in Philadelphia, making the city a place where all businesses can thrive and making City government a large-scale procurer with whom diverse businesses can work. The anecdotal evidence represents a vivid body of information from which to draw recommendations for action going forward. The adjacent analyses point the City to areas where work can be done to create a more equitable playing field for more people to start, sustain, and grow businesses. And the Availability estimates themselves offer OEO guidance in the use of race- and gender-specific goals to remedy past disparities and present discrimination, to the end of yielding better outcomes for the City as a procurer and the city as a business location of choice.

5.3. Implications for OEO

OEO already has many mechanisms and programs in place to assist minority- and woman-owned businesses, regardless of certification status. The results of this availability analysis, in particular the anecdotal evidence, provides opportunities for action that OEO can employ through the following recommendations.

Increase MWDSBE Availability and Capacity

Through its partnership with The Enterprise Center, OEO offers programs to aid MWDSBE growth. Several interviewees expressed concerns about building capacity and establishing relationships with prime contractors. The recently created Mentor-Protégé program housed at The Enterprise Center provides smaller firms the ability to connect and network with larger firms, as well as to receive skill-building and technical assistance. The anecdotal evidence shows there is a need and an opportunity to market and provide this program to more MWDSBEs.

Recommendation:

- Promote and expand the existing Mentor-Protégé program.

Launched in conjunction with the City's Rebuild initiative, the Emerging Vendors' Program allows participants to count toward diversity goals on City contracts while getting assistance to work toward their permanent certification as a minority- or woman-owned business. The pilot program has been successful enough to consider implementing a city-wide program.

Recommendation:

- Expand the Emerging Vendors program beyond Rebuild to the entire city.

Increasing Connections for MWDSBEs

Concerns regarding departmental processes and responsiveness were raised on multiple levels. These concerns may be alleviated by providing platforms for interactions between MWDSBE and City Departments.

The results of the availability survey and interviews indicate that existing programs to assist minority- and woman-owned businesses offered through OEO and its partners are not as widely known as expected.

Recommendations:

- Provide opportunities for MWDSBEs to meet with Department leaders.
- Regularly market the Local Business Entity (LBE) and Local Business Purchasing Initiative (LBPI), the Mentor-Protégé Program, and the Emerging Vendors Program. Include working with the ethnic chambers to promote these programs.

Learning /Technical Assistance

Concerns were raised regarding the transparency of the City's bidding and contracting processes. There are several perceptions driving these concerns including relationships, business location, and the decision-making process. The survey and interviews indicate confusion or lack of understanding around the City's bidding process and requirements which may be acting as barriers to participation.

Recommendations:

- Create a mechanism for MWDSBEs who are not selected to participate on a City bid or RFP to receive feedback on what they need to do to be more competitive.
- Provide quarterly forums in conjunction with Procurement to provide information and tutorials on how to register and navigate the City's procurement system, how to search for bid opportunities, share information on upcoming or potential bid opportunities, and to answer questions regarding bidding requirements. From these sessions, compile and maintain a Frequently Asked Questions section on the Procurement web page.

Although OEO is not a certifying agency and does not provide technical assistance for certification application, the anecdotal evidence received indicates that MWDSBE firms, certified or not, feel overwhelmed by the process, do not fully understand the process, or do not understand the advantages and benefits of being certified. The City's website contains summary information and links to certification agencies. OEO could be doing more to promote certification.

Recommendations:

- Provide a detailed explanation on the OEO website regarding the different types of certifications and programs including more information on the benefits of certification.
- Organize forums for MWDSBEs to learn about the types of certifications and requirements, to connect with certifying agencies, and to ask questions about the certification process and certification maintenance.

Appendix A: Additional Information on the City of Philadelphia’s Spending Distribution from Fiscal Years 2019 to 2021

Figure A.1 – FY 2019 to FY 2021 Spend by Two-Digit NAICS and Contract Type

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total
11	Agriculture, Forestry, Fishing and Hunting	\$0.4	\$0.0	\$0.0	\$0.0	\$0.4	0%
22	Utilities	\$1.1	\$0.0	\$33.0	\$0.1	\$34.2	1%
23	Construction	\$23.6	\$705.4	\$26.2	\$0.0	\$755.1	17%
31	Manufacturing	\$0.1	\$0.0	\$2.4	\$0.0	\$2.6	0%
32	Manufacturing	\$3.1	\$0.1	\$23.2	\$0.0	\$26.3	1%
33	Manufacturing	\$10.0	\$18.2	\$41.4	\$0.0	\$69.6	2%
42	Wholesale Trade	\$2.0	\$18.7	\$46.9	\$0.0	\$67.5	2%
44	Retail Trade	\$13.9	\$0.6	\$9.9	\$0.0	\$24.4	1%
45	Retail Trade	\$0.7	\$0.2	\$25.8	\$0.0	\$26.7	1%
48	Transportation and Warehousing	\$1.4	\$1.3	\$6.7	\$0.0	\$9.3	0%
49	Transportation and Warehousing	\$0.6	\$8.7	\$4.6	\$0.0	\$14.0	0%
51	Information	\$40.1	\$3.4	\$0.7	\$0.0	\$44.2	1%
52	Finance and Insurance	\$140.8	\$2.1	\$0.0	\$3.3	\$146.2	3%
53	Real Estate and Rental and Leasing	\$136.8	\$0.7	\$7.2	\$0.2	\$145.0	3%
54	Professional, Scientific, and Technical Services	\$270.9	\$2.8	\$20.0	\$0.0	\$293.7	7%
55	Management of Companies and Enterprises	\$0.0	\$1.2	\$0.5	\$0.0	\$1.7	0%
56	Administrative and Support and Waste Management and Remediation Services	\$24.5	\$98.7	\$25.2	\$0.0	\$148.5	3%
61	Educational Services	\$26.4	\$3.4	\$0.0	\$3.0	\$32.8	1%
62	Health Care and Social Assistance	\$1,968.2	\$0.4	\$0.7	\$0.0	\$1,969.4	44%

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total
71	Arts, Entertainment, and Recreation	\$61.0	\$0.0	\$0.0	\$0.0	\$61.0	1%
72	Accommodation and Food Services	\$0.0	\$0.5	\$1.3	\$0.0	\$1.8	0%
81	Other Services (except Public Administration)	\$365.5	\$0.0	\$32.3	\$0.0	\$397.8	9%
92	Public Administration	\$172.5	\$0.0	\$10.5	\$2.5	\$185.5	4%
Total		\$3,263	\$866	\$318	\$9	\$4,457	100%

Source: Philadelphia Office of Economic Opportunity (2021); Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Figure A.2 – FY 2019 to FY 2021 Spend by Three-Digit NAICS and Contract Type (in Descending Order by Spend Amount)

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total
621	Ambulatory Health Care Services	\$1,491.1	\$0.1	\$0.7	\$0.0	\$1,491.9	33.5%
236	Construction of Buildings	\$23.3	\$393.4	\$9.6	\$0.0	\$426.3	9.6%
624	Social Assistance	\$368.8	\$0.3	\$0.0	\$0.0	\$369.1	8.3%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	\$359.5	\$0.0	\$0.0	\$0.0	\$359.5	8.1%
541	Professional, Scientific, and Technical Services	\$270.9	\$2.8	\$20.0	\$0.0	\$293.7	6.6%
237	Heavy and Civil Engineering Construction	\$0.0	\$181.3	\$10.3	\$0.0	\$191.6	4.3%
926	Administration of Economic Programs	\$137.8	\$0.0	\$0.2	\$2.5	\$140.5	3.2%
531	Real Estate	\$136.8	\$0.1	\$0.3	\$0.2	\$137.4	3.1%
238	Specialty Trade Contractors	\$0.3	\$130.6	\$6.4	\$0.0	\$137.3	3.1%
561	Administrative and Support Services	\$22.4	\$98.2	\$9.8	\$0.0	\$130.4	2.9%
623	Nursing and Residential Care Facilities	\$85.6	\$0.0	\$0.0	\$0.0	\$85.6	1.9%
522	Credit Intermediation and Related Activities	\$72.4	\$0.0	\$0.0	\$3.3	\$75.7	1.7%
524	Insurance Carriers and Related Activities	\$65.3	\$1.2	\$0.0	\$0.0	\$66.5	1.5%
713	Amusement, Gambling, and Recreation Industries	\$59.5	\$0.0	\$0.0	\$0.0	\$59.5	1.3%
423	Merchant Wholesalers, Durable Goods	\$1.3	\$18.1	\$26.0	\$0.0	\$45.4	1.0%
221	Utilities	\$1.1	\$0.0	\$33.0	\$0.1	\$34.2	0.8%
611	Educational Services	\$26.4	\$3.4	\$0.0	\$3.0	\$32.8	0.7%
811	Repair and Maintenance	\$0.0	\$0.0	\$32.3	\$0.0	\$32.3	0.7%
511	Publishing Industries except Internet	\$29.8	\$2.2	\$0.2	\$0.0	\$32.2	0.7%
334	Computer and Electronic Product Manufacturing	\$8.9	\$7.0	\$15.5	\$0.0	\$31.4	0.7%
925	Administration of Housing Programs, Urban Planning, and Community Development	\$23.6	\$0.0	\$0.0	\$0.0	\$23.7	0.5%
622	Hospitals	\$22.7	\$0.0	\$0.0	\$0.0	\$22.7	0.5%
424	Merchant Wholesalers, Nondurable Goods	\$0.6	\$0.6	\$20.9	\$0.0	\$22.1	0.5%

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total
333	Machinery Manufacturing	\$0.0	\$10.5	\$10.2	\$0.0	\$20.7	0.5%
562	Waste Management and Remediation Services	\$2.1	\$0.5	\$15.4	\$0.0	\$18.1	0.4%
922	Justice, Public Order, and Safety Activities	\$6.3	\$0.0	\$10.3	\$0.0	\$16.6	0.4%
325	Chemical Manufacturing	\$2.3	\$0.0	\$13.8	\$0.0	\$16.2	0.4%
454	Nonstore Retailers	\$0.0	\$0.0	\$14.5	\$0.0	\$14.5	0.3%
493	Warehousing and Storage	\$0.2	\$8.7	\$4.6	\$0.0	\$13.5	0.3%
443	Electronics and Appliance Stores	\$7.0	\$0.0	\$0.8	\$0.0	\$7.8	0.2%
532	Rental and Leasing Services	\$0.0	\$0.6	\$6.9	\$0.0	\$7.5	0.2%
332	Fabricated Metal Product Manufacturing	\$1.1	\$0.7	\$5.6	\$0.0	\$7.4	0.2%
452	General Merchandise Stores	\$0.0	\$0.0	\$7.2	\$0.0	\$7.2	0.2%
324	Petroleum and Coal Products Manufacturing	\$0.0	\$0.1	\$6.8	\$0.0	\$6.9	0.2%
441	Motor Vehicle and Parts Dealers	\$0.0	\$0.0	\$6.8	\$0.0	\$6.8	0.2%
488	Support Activities for Transportation	\$0.9	\$0.0	\$5.7	\$0.0	\$6.6	0.1%
446	Health and Personal Care Stores	\$6.1	\$0.0	\$0.0	\$0.0	\$6.2	0.1%
812	Personal and Laundry Services	\$5.9	\$0.0	\$0.0	\$0.0	\$5.9	0.1%
517	Telecommunications	\$4.9	\$0.2	\$0.2	\$0.0	\$5.3	0.1%
335	Electrical Equipment, Appliance, and Component Manufacturing	\$0.0	\$0.0	\$5.1	\$0.0	\$5.2	0.1%
453	Miscellaneous Store Retailers	\$0.7	\$0.0	\$4.1	\$0.0	\$4.8	0.1%
923	Administration of Human Resource Programs	\$3.8	\$0.0	\$0.0	\$0.0	\$3.8	0.1%
518	Data Processing, Hosting, and Related Services	\$1.8	\$1.0	\$0.3	\$0.0	\$3.1	0.1%
336	Transportation Equipment Manufacturing	\$0.0	\$0.0	\$2.8	\$0.0	\$2.8	0.1%
525	Funds, Trusts, and Other Financial Vehicles	\$2.7	\$0.0	\$0.0	\$0.0	\$2.7	0.1%
311	Food Manufacturing	\$0.1	\$0.0	\$2.2	\$0.0	\$2.3	0.1%
448	Clothing and Clothing Accessories Stores	\$0.8	\$0.0	\$1.4	\$0.0	\$2.2	0.1%
512	Motion Picture and Sound Recording Industries	\$1.8	\$0.0	\$0.0	\$0.0	\$1.8	0.0%

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total
519	Other Information Services	\$1.8	\$0.0	\$0.0	\$0.0	\$1.8	0.0%
327	Nonmetallic Mineral Product Manufacturing	\$0.2	\$0.0	\$1.6	\$0.0	\$1.8	0.0%
551	Management of Companies and Enterprises Performing Arts, Spectator Sports, and Related	\$0.0	\$1.2	\$0.5	\$0.0	\$1.7	0.0%
711	Industries	\$1.5	\$0.0	\$0.0	\$0.0	\$1.5	0.0%
484	Truck Transportation	\$0.5	\$0.0	\$0.9	\$0.0	\$1.4	0.0%
485	Transit and Ground Passenger Transportation	\$0.0	\$1.3	\$0.1	\$0.0	\$1.4	0.0%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	\$0.4	\$1.0	\$0.0	\$0.0	\$1.3	0.0%
339	Miscellaneous Manufacturing	\$0.0	\$0.0	\$1.3	\$0.0	\$1.3	0.0%
721	Accommodation	\$0.0	\$0.0	\$1.0	\$0.0	\$1.0	0.0%
444	Building Material and Garden Equipment and Supplies Dealers	\$0.0	\$0.1	\$0.9	\$0.0	\$0.9	0.0%
722	Food Services and Drinking Places	\$0.0	\$0.5	\$0.3	\$0.0	\$0.8	0.0%
331	Primary Metal Manufacturing	\$0.0	\$0.0	\$0.7	\$0.0	\$0.7	0.0%
326	Plastics and Rubber Products Manufacturing	\$0.0	\$0.0	\$0.6	\$0.0	\$0.6	0.0%
921	Executive, Legislative, and Other General Government Support	\$0.6	\$0.0	\$0.0	\$0.0	\$0.6	0.0%
445	Food and Beverage Stores	\$0.0	\$0.5	\$0.0	\$0.0	\$0.5	0.0%
323	Printing and Related Support Activities	\$0.5	\$0.0	\$0.0	\$0.0	\$0.5	0.0%
492	Couriers and Messengers	\$0.5	\$0.0	\$0.0	\$0.0	\$0.5	0.0%
115	Support Activities for Agriculture and Forestry	\$0.4	\$0.0	\$0.0	\$0.0	\$0.4	0.0%
321	Wood Product Manufacturing	\$0.1	\$0.0	\$0.3	\$0.0	\$0.3	0.0%
924	Administration of Environmental Quality Programs	\$0.3	\$0.0	\$0.0	\$0.0	\$0.3	0.0%
314	Textile Product Mills	\$0.0	\$0.0	\$0.2	\$0.0	\$0.2	0.0%
451	Sporting Goods, Hobby, Musical Instrument, and Book Stores	\$0.0	\$0.2	\$0.0	\$0.0	\$0.2	0.0%

NAICS	NAICS Label	Personal and Professional Service (\$M)	Public Works (\$M)	Service Supplies and Equipment (\$M)	Other (\$M)	Total (\$M)	% Total	
312	Beverage and Tobacco Product Manufacturing	\$0.0	\$0.0	\$0.1	\$0.0	\$0.1	0.0%	
337	Furniture and Related Product Manufacturing	\$0.0	\$0.0	\$0.1	\$0.0	\$0.1	0.0%	
712	Museums, Historical Sites, and Similar Institutions		\$0.1	\$0.0	\$0.0	\$0.0	\$0.1	0.0%
315	Apparel Manufacturing		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0%
Total	-		\$3,263	\$866	\$319	\$9	\$4,458	

Source: Philadelphia Office of Economic Opportunity (2021); Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Appendix B: Additional Information on the Custom Census Survey Results

Business Availability Survey

During the study period, a business availability survey was collected from 1,201 businesses from May through mid-August 2021. The contact list for businesses was sourced from:

- The City of Philadelphia Department of Commerce business list
- The City of Philadelphia Department of Procurement registered business list
- The OEO Directory
- Unified Certification Program (UCP) databases for Philadelphia County (PA), Bucks County (PA), Chester County (PA), Delaware County (PA), Montgomery County (PA), Burlington County (NJ), Camden County (NJ), Gloucester County (NJ), and New Castle County (DE).

The survey was sent to 17,048 individual email addresses compiled from these lists. A total of 970 emails bounced back, 296 opted out of the survey, and two businesses responded they had closed due to retirement. The remaining 14,576 did not respond to the survey. Attempts were also made to contact businesses via phone to complete the survey.

The survey contained 18 questions and took an average of seven minutes to complete. The first four introductory questions were asked regarding the name of the businesses owner and business address. The final question, question 18, requested contact information if the respondent was interested in a follow up interview. The results of the remaining survey questions are presented in the following tables and charts.

Q5. Select the main category of business your company performs from the dropdown box.

NAICS Code and Description	#	%
722: Food Services and Drinking Places	168	16.58%
541: Professional, Scientific, and Technical Services	148	14.61%
446: Health and Personal Care Stores	69	6.81%
445: Food and Beverage Stores	65	6.42%
611: Educational Services	61	6.02%
236: Construction of Buildings	50	4.94%
238: Specialty Trade Contractors	35	3.46%
711: Performing Arts, Spectator Sports, and Related Industries	35	3.46%
519: Other Information Services	20	1.97%
811: Repair and Maintenance	20	1.97%

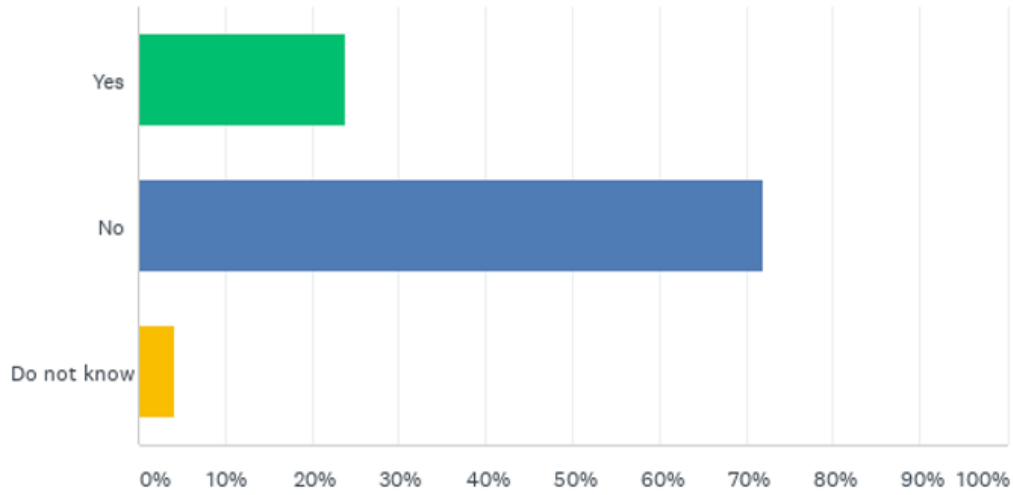
NAICS Code and Description	#	%
812: Personal and Laundry Services	20	1.97%
453: Miscellaneous Store Retailers	19	1.88%
512: Motion Picture and Sound Recording Industries	18	1.78%
311: Food Manufacturing	15	1.48%
713: Amusement, Gambling, and Recreation Industries	15	1.48%
561: Administrative and Support Services	14	1.38%
323: Printing and Related Support Activities	12	1.18%
448: Clothing and Clothing Accessories Stores	12	1.18%
451: Sporting Goods, Hobby, Musical Instrument, and Book Stores	12	1.18%
621: Ambulatory Health Care Services	12	1.18%
452: General Merchandise Stores	11	1.09%
531: Real Estate	11	1.09%
339: Miscellaneous Manufacturing	9	0.89%
518: Data Processing, Hosting, and Related Services	9	0.89%
532: Rental and Leasing Services	9	0.89%
423: Merchant Wholesalers, Durable Goods	8	0.79%
332: Fabricated Metal Product Manufacturing	7	0.69%
424: Merchant Wholesalers, Nondurable Goods	7	0.69%
454: Nonstore Retailers	7	0.69%
524: Insurance Carriers and Related Activities	7	0.69%
484: Truck Transportation	6	0.59%
517: Telecommunications	6	0.59%
712: Museums, Historical Sites, and Similar Institutions	6	0.59%
315: Apparel Manufacturing	5	0.49%
441: Motor Vehicle and Parts Dealers	5	0.49%
562: Waste Management and Remediation Services	5	0.49%
221: Utilities	4	0.39%
335: Electrical Equipment, Appliance, and Component Manufacturing	4	0.39%
442: Furniture and Home Furnishings Stores	4	0.39%
624: Social Assistance	4	0.39%
921: Executive, Legislative, and Other General Government Support	4	0.39%

NAICS Code and Description	#	%
925: Administration of Housing Programs, Urban Planning, and Community Development	4	0.39%
237: Heavy and Civil Engineering Construction	3	0.30%
321: Wood Product Manufacturing	3	0.30%
337: Furniture and Related Product Manufacturing	3	0.30%
551: Management of Companies and Enterprises	3	0.30%
623: Nursing and Residential Care Facilities	3	0.30%
721: Accommodation	3	0.30%
923: Administration of Human Resource Programs	3	0.30%
113: Forestry and Logging	2	0.20%
312: Beverage and Tobacco Product Manufacturing	2	0.20%
444: Building Material and Garden Equipment and Supplies Dealers	2	0.20%
485: Transit and Ground Passenger Transportation	2	0.20%
488: Support Activities for Transportation	2	0.20%
511: Publishing Industries (except Internet)	2	0.20%
523: Securities, Commodity Contracts, and Other Financial Investments and Related Activities	2	0.20%
111: Crop Production	1	0.10%
114: Fishing, Hunting and Trapping	1	0.10%
115: Support Activities for Agriculture and Forestry	1	0.10%
326: Plastics and Rubber Products Manufacturing	1	0.10%
331: Primary Metal Manufacturing	1	0.10%
333: Machinery Manufacturing	1	0.10%
334: Computer and Electronic Product Manufacturing	1	0.10%
425: Wholesale Electronic Markets and Agents and Brokers	1	0.10%
443: Electronics and Appliance Stores	1	0.10%
447: Gasoline Stations	1	0.10%
491: Postal Service	1	0.10%
492: Couriers and Messengers	1	0.10%
622: Hospitals	1	0.10%
814: Private Households	1	0.10%
922: Justice, Public Order, and Safety Activities	1	0.10%

NAICS Code and Description	#	%
926: Administration of Economic Programs	1	0.10%

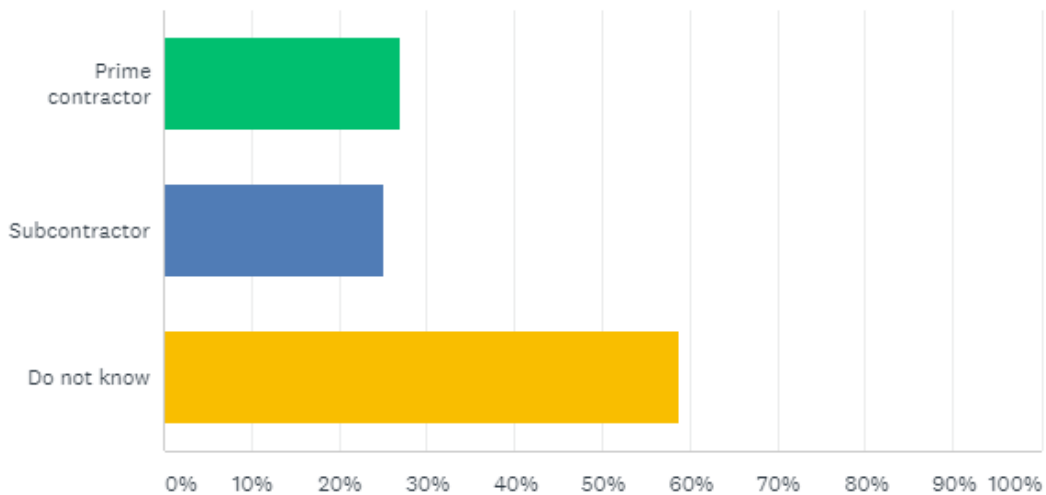
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q6. During the past five years, has your company submitted a bid or received an award for any part of a contract for the City of Philadelphia or for a private sector organization located within the City of Philadelphia?



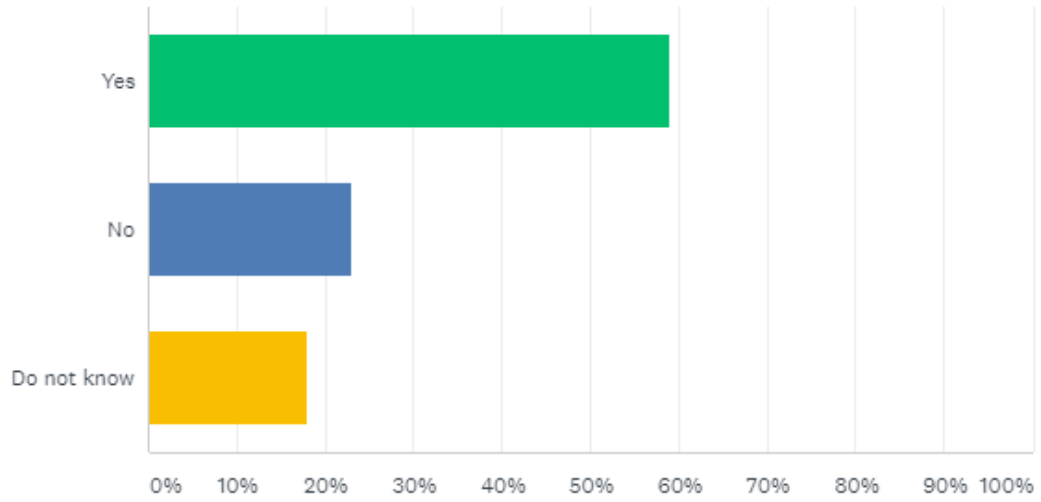
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q7. Were those bids or awards to work as a Prime Contractor or a Subcontractor? Select all that apply.



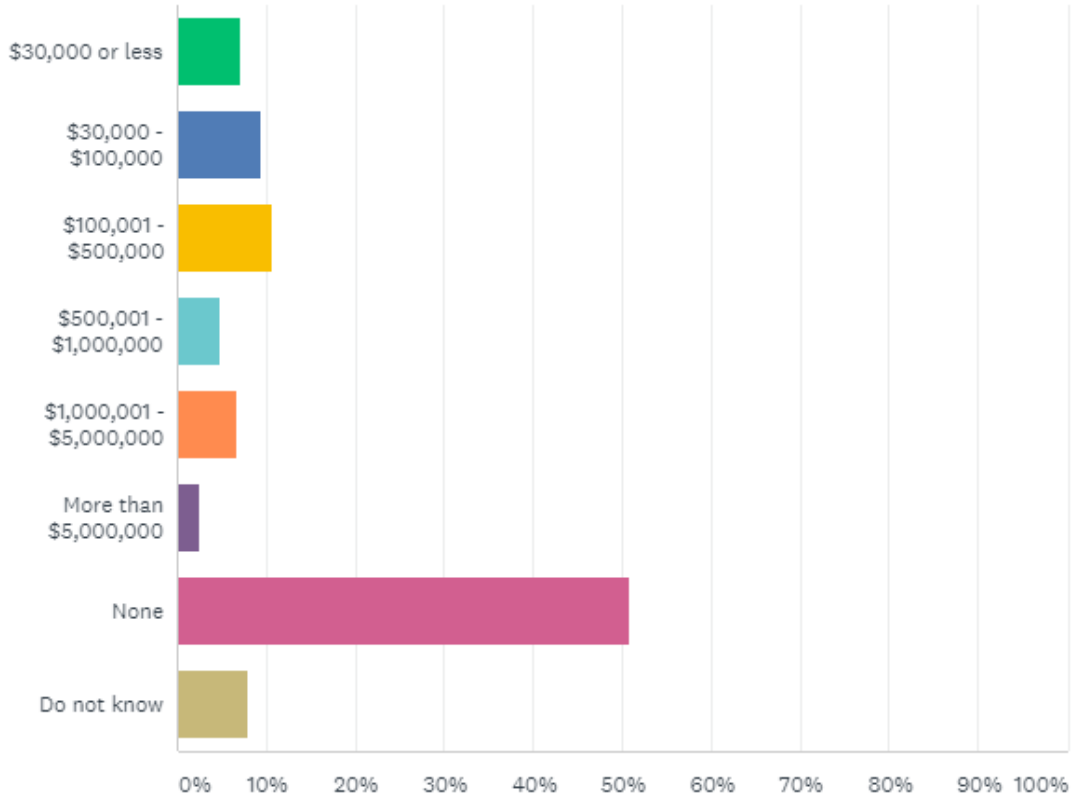
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q8. Is your company interested in working with the City of Philadelphia as either a prime contractor or a sub-contractor?



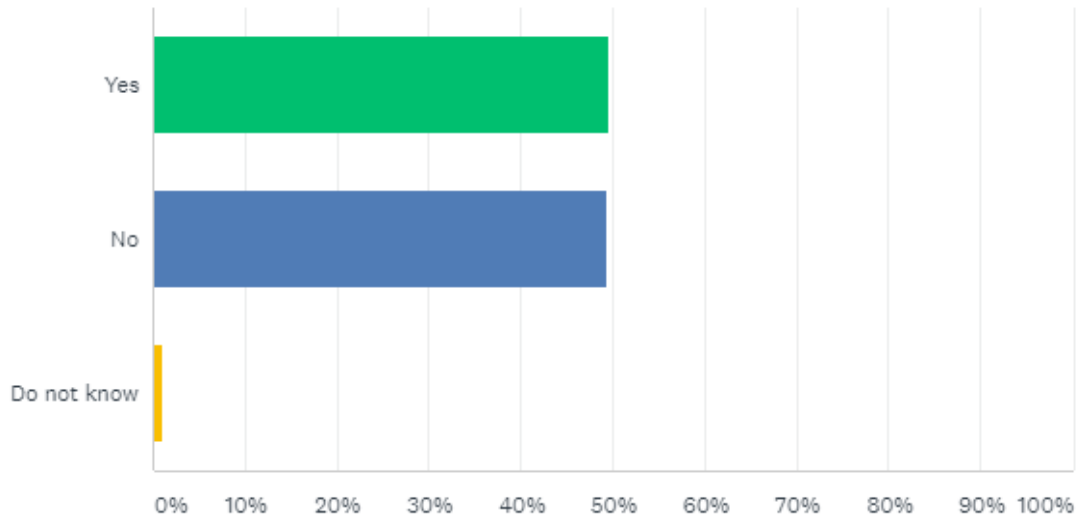
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q9. What was the largest contract or subcontract that your company bid on or was awarded during the past five years in either the private or public sector? This includes contracts not yet complete.



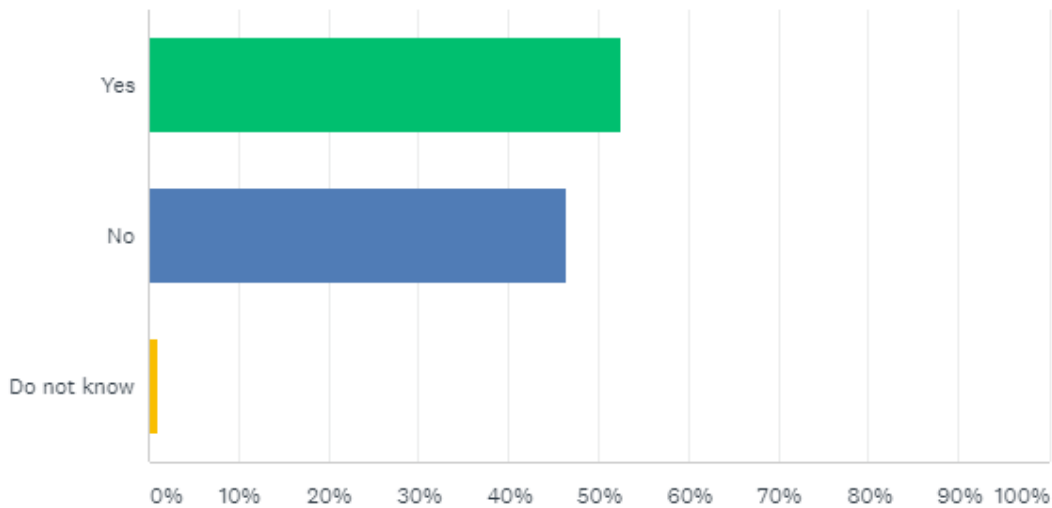
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q10. Is this company a woman-owned business? (A business is defined as woman-owned if more than half—that is, 51 percent or more—of the ownership and control is by women.)



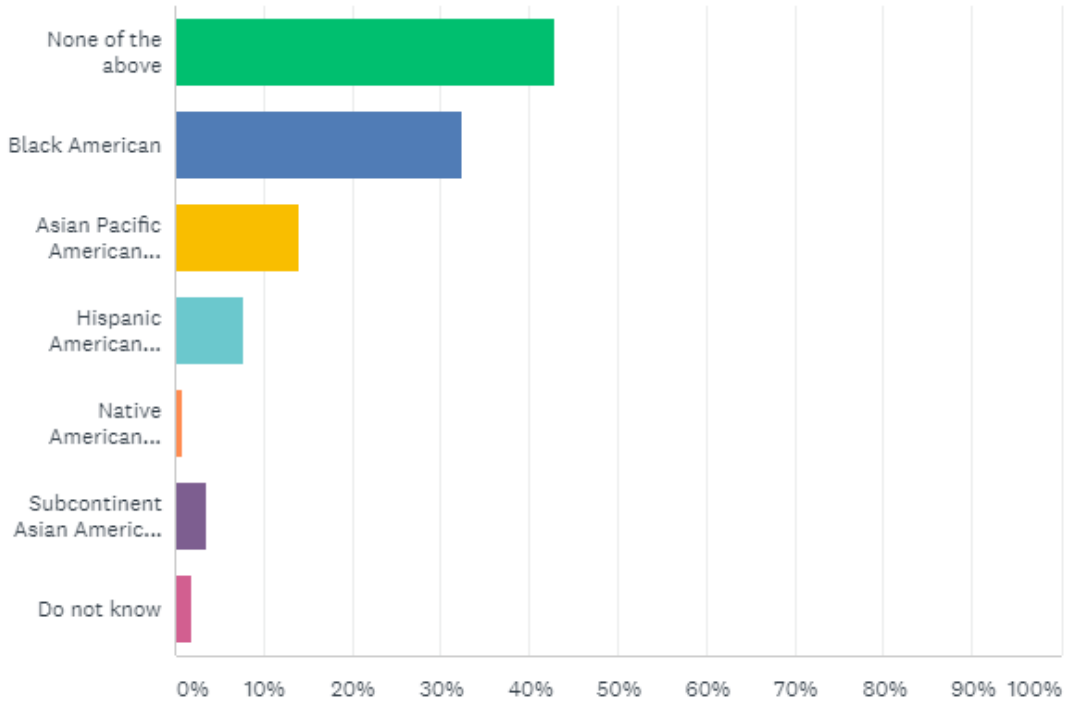
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q11. Is this company a minority-owned business? (A business is defined as minority-owned if more than half—that is, 51 percent or more—of the ownership and control is by Black American, Asian American, Hispanic American, or Native American.)



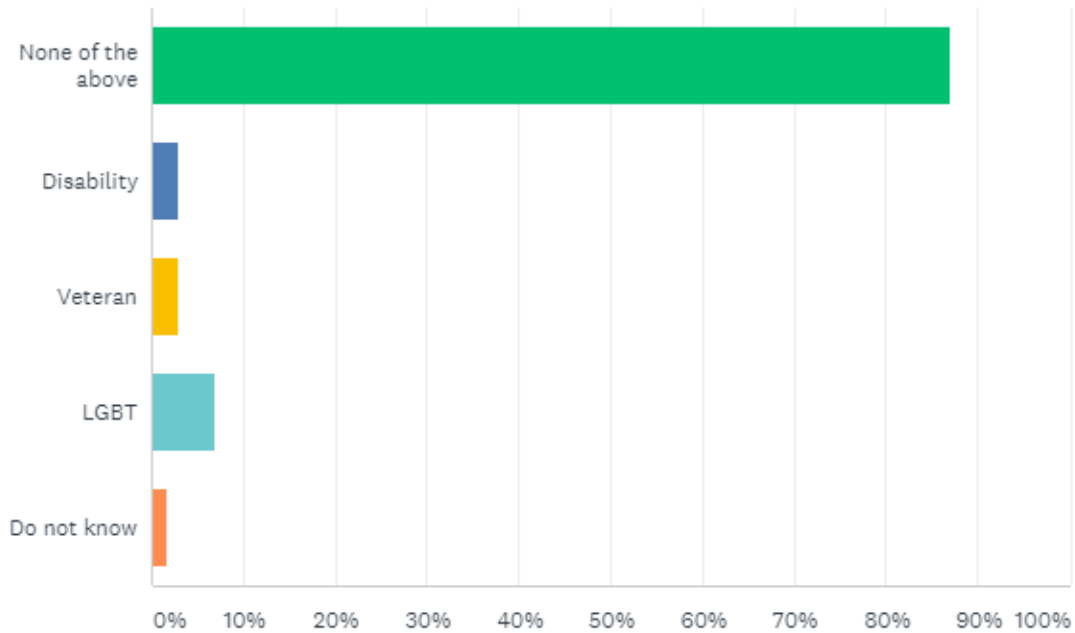
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q12. Would you say that the minority group ownership of your company is mostly Black American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, or Native American? Select all that apply.



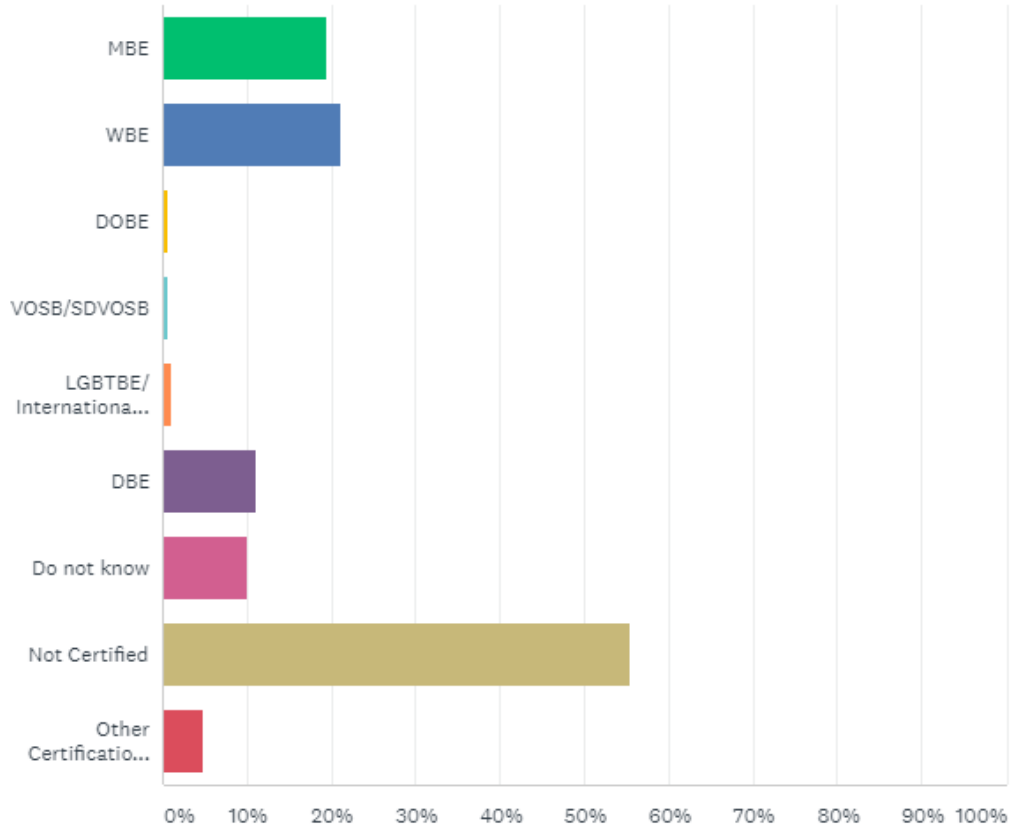
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q13. Is this company a Disability-owned, Veteran-owned, or LGBT-owned business? (A business is defined as Disability-owned, Veteran-owned, or LGBT-owned if more than half—that is, 51 percent or more—of the ownership and control is by a person with physical and or mental impairment that substantially limits one or more major life activities, by a person who is a veteran, and/or by people that identify as Lesbian, Gay, Bisexual, or Transgender.) Select all that apply.



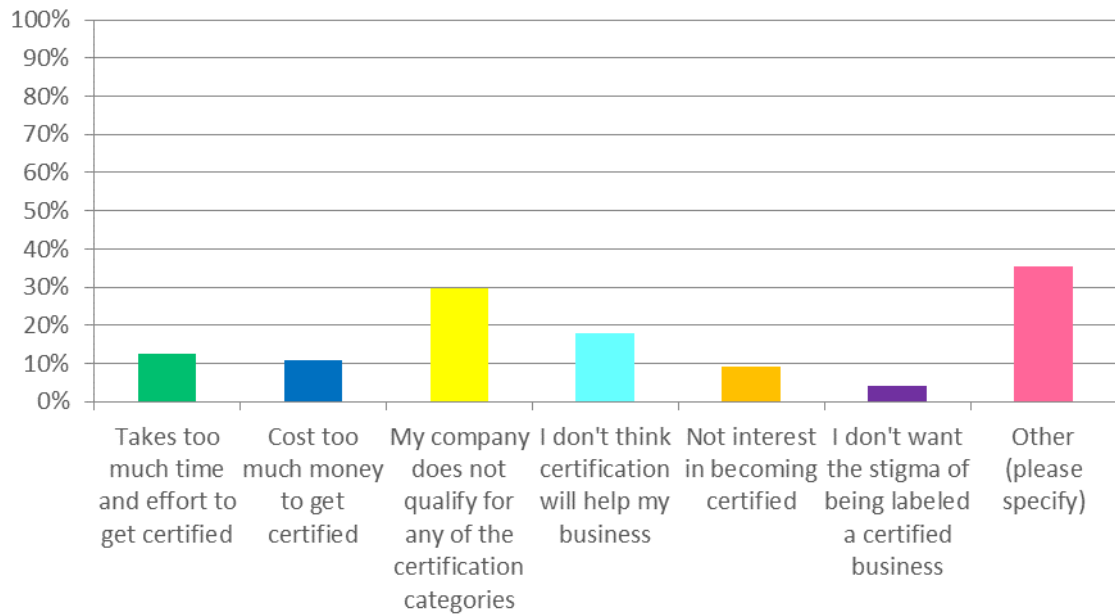
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q14. Is your company certified as a minority (MBE), woman (WBE), disability-owned (DOBE), veteran (VOSB/SDVOSB), LGBT (LGBTBE), and/or Disadvantaged Business Entity (DBE)? Select all that apply.



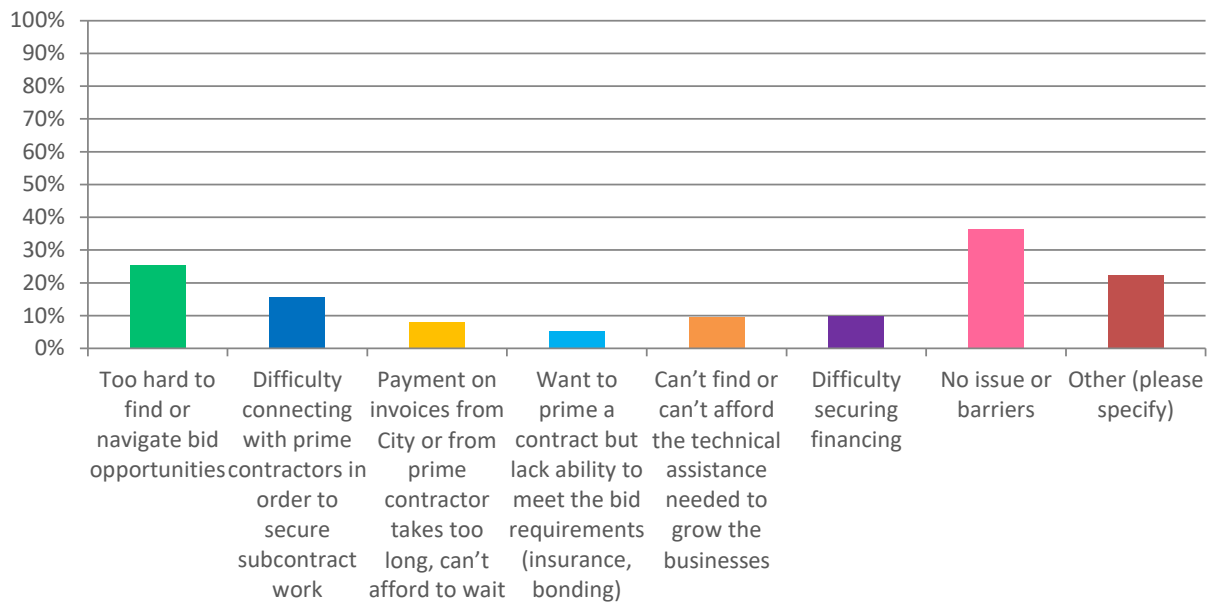
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q15. If you answered "Not Certified"; select all the reasons why your company is not certified. Select all that apply.



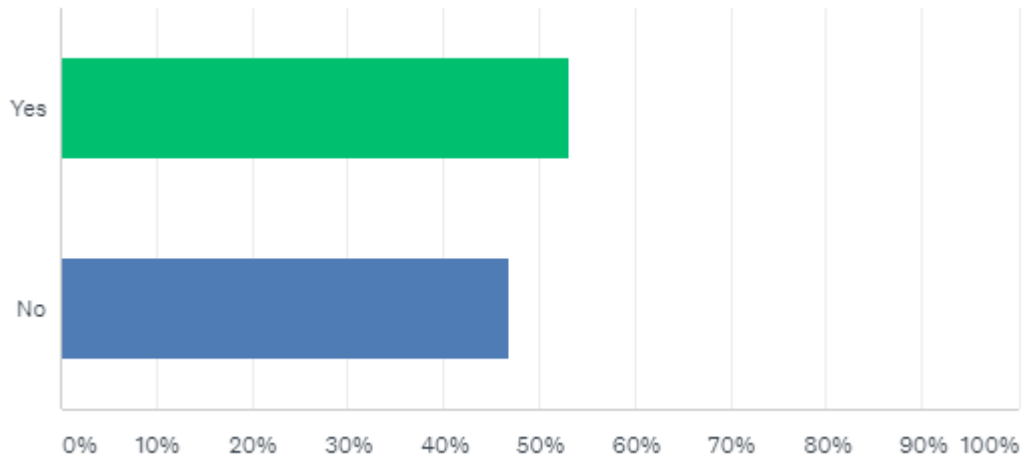
Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q16. Has your company encountered difficulty in securing business with the City of Philadelphia? Select all that apply.



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Q17. Would you be willing to participate in a follow-up telephone interview about any of those issues?



Source: Econsult Solutions, Inc. (2021); Milligan & Company, LLC (2021)

Appendix C: Additional Information on Business Formation Analysis Results

An important adjacent analysis in an Availability Study is a business formation analysis. This is because a stand-alone Availability Study only accounts for the present distribution of ready, willing, and able businesses in the relevant geography for a jurisdiction. Such an analysis does not account for the possibility that the existence of discrimination has artificially lowered the proportion of businesses that are owned and operated by people of color or women. A business formation analysis is one way to determine if there are systemic differences in business formation rates, which if they exist would indicate the possibility of the presence of discrimination in causing availability levels to be lower than they should be, and are thus an important supplement to an Availability Study to appropriately interpret availability estimates.

The established national literature on this subject is conclusive about the differences in business formation and survival rates by race, ethnicity, and gender. In a recent study, it was found that Black-owned start-up businesses were significantly different in business size than white-owned start-ups, with fully two-thirds of the difference being explained by either business owner credit score or business owner net worth.⁹ This will be a subject that is delved into in more detail in the next sub-section, on capital access differences, but it speaks to broad inequalities in household wealth and household financial literacy which resulted in a racially disparate effect on business formation and survival rates. Similarly, woman-owned businesses were reported to be smaller, have lower survival rates, and experience financial challenges more often than male-owned businesses, all of which lead to lower Availability levels for woman-owned businesses than if these key metrics had a more equitable distribution.¹⁰

Business formation analyses that are part of Availability Studies often capitalize on the existence of very detailed publicly available data on self-employment and other relevant characteristics which is available through the US Census Bureau's American Community Survey (ACS) Public Use Microdata Sample (PUMS) data. For this analysis, the ESI team looked at people age 16 and older residing in the six-county region, excluding those not in the labor force who have either never worked or who have not worked in the past five years. This constitutes a universe of over 104,000 observations from the 2019 PUMS files. In addition to race, ethnicity, and gender, the ESI team included other potentially explanatory variables that it wanted to control for in its analysis, including homeownership status, income level, educational attainment, and speaking a language other than English at home. See Figure B.1 for more information on variables included and their prevalence within the universe of people analyzed.

⁹2016 *Small Business Credit Survey*, Federal Reserve Bank of Cleveland, 29 Nov. 2017, www.clevelandfed.org/en/community-development/publications-by-topic/small-business/about-the-joint-small-business-credit-survey/2016-small-business-credit-survey.aspx.

¹⁰ 2016 *Small Business Credit Survey*, Federal Reserve Bank of Cleveland, 29 Nov. 2017, www.clevelandfed.org/en/community-development/publications-by-topic/small-business/about-the-joint-small-business-credit-survey/2016-small-business-credit-survey.aspx.

Figure B.1 – Variables Included in Business Formation Analysis and Proportion of Labor Force Participants in the Six-County Region

Variable	% of Total
Black	13.6%
Asian	5.8%
Hispanic	2.7%
Two or More Races	1.7%
Other Race	2.2%
Female	50.0%
Owns Home	72.1%
Personal Income (every +\$10,000)	N/A
High School Graduate or Equivalent	24.1%
Some College	26.0%
Bachelor's Degree	24.9%
Advanced Degree	17.6%
Language Other than English Spoken at Home	14.4%

Source: US Census Bureau (2019), Econsult Solutions (2021)

Based on this data set, self-employment rates can be calculated for various racial, ethnic, and gender categories and by industry. As shown in Figure B.2, self-employment varies across these categories and industries.

Figure B.2 – Self-Employment Rates by Race & Ethnicity, Gender, and Industry for Labor Force Participants in the Six-County Region

NAICS	White	Black	Asian	Hispanic	Two or More	Other	Male	Female
23	24.6%	19.8%	29.8%	16.7%	26.3%	16.2%	24.5%	13.6%
33	3.9%	3.4%	2.5%	3.7%	0.0%	1.5%	3.4%	4.0%
42	8.0%	5.3%	13.2%	8.8%	2.4%	3.2%	9.3%	3.5%
52	5.2%	1.2%	1.8%	5.4%	2.0%	0.0%	7.0%	1.7%
53	25.1%	7.7%	21.8%	25.7%	24.1%	12.6%	25.5%	17.6%
54	18.6%	11.4%	7.1%	8.0%	17.6%	17.2%	19.8%	13.0%
56	18.3%	5.2%	5.5%	10.5%	9.9%	12.1%	13.3%	13.8%
62	5.5%	2.6%	4.5%	3.7%	2.7%	4.2%	6.7%	3.7%
81	19.3%	14.5%	21.8%	25.3%	16.5%	16.2%	15.6%	20.8%
Total	13%	6%	8%	10%	9%	9%	14%	8%

Source: US Census Bureau (2019), Econsult Solutions (2021)

But in order to fully understand whether disparities exist, one must control for potentially explanatory variables, as listed above. This can be done through the use of a logistic regression involving multiple variables, as follows (see multi-variate equation and glossary below):

- $Self\text{-}Employment = f(Black, Asian, Hisp, TwoMore, Other, Female, Homeowner, Inc10k, HSGrad, SmeClg, Bach, Adv, LOTE)^{11}$
- Self-employment, the dependent variable, is a function of the following independent variables:
- Black = person is Black American (yes = 1, no = 0)
- Asian = person is Asian American (yes = 1, no = 0)
- Hisp = person is Hispanic American (yes = 1, no = 0)
- TwoMore = person is of two or more races (yes = 1, no = 0)
- Other = person is of a single race/ethnicity other than White, Black, Asian, or Hispanic (yes = 1, no = 0)
- Female = person that identifies as female (yes = 1, no = 0)
- Hmeownr = person is a homeowner (yes = 1, no = 0)
- Inc10k = every \$10,000 in personal income (e.g. for someone grossing \$60,000 per year, they would be entered into the equation as “6”)
- HSGrad = person’s highest educational attainment is a high school diploma or equivalent (yes = 1, no = 0)
- SmeClg = person’s highest educational attainment is some college (yes = 1, no = 0)
- Bach = person’s highest educational attainment is a bachelor’s degree (yes = 1, no = 0)
- Adv = person’s highest educational attainment is an Advanced degree (yes = 1, no = 0)
- LOTE = person speaks a language other than English at home (yes = 1, no = 0)

¹¹ With this many variables, some of them potentially interacting with each other in ways that may cloud the regression analysis, it is important to ensure that there is no multicollinearity between variables. To check for this, the variance inflation factor (VIF) can be measured, which indicates the correlation across predictor variables in a regression model. A VIF factor of one suggests the complete absence of multicollinearity. Typically, any VIF above five suggests too much collinearity to have confidence in a regression analysis (James, Gareth, Daniela Witten, Trevor Hastie, and Robert Tibshirani. 2014. *An Introduction to Statistical Learning: With Applications in R*. Springer Publishing Company, Incorporated.). As indicated in the table below, there does not appear to be any problematic levels of multicollinearity in the regression analysis as specified in this report.

Variable	VIF	Variable	VIF	Variable	VIF
Black	1.04	Female	1.04	HSGrad	3.24
Asian	1.35	Hmeownr	1.06	SmeClg	3.28
Hisp	1.02	Inc10k	1.26	Bach	3.59
TwoMore	1.01	LOTE	1.44	Adv	3.47
Other	1.11				

For the binary dependent variable, self-employment, coefficients are interpreted as log-odds for this logistic regression analysis. This means that the resulting coefficients represent the probability of someone being self-employed, relative to the probability of the relevant comparison group. A negative coefficient signifies that a group has a lower probability of being self-employed relative to their comparison group, and the further away from zero that negative coefficient is, the lower the probability. Whereas a positive coefficient signifies that a group has a higher probability of being self-employed relative to their comparison group, and the further away from zero that positive coefficient is, the higher the probability. This approach yielded the following results, the vast majority of which are statistically significant and therefore can be considered robust (see Figure B.3).

Figure B.3 - Regression Analysis Results for Determining Self-Employment Probabilities By Race, Ethnicity, and Gender for Labor Force Participants in the Six-County Region

Variable	Estimate	Std. Error	Z Value	Pr(> z)	
Constant	-2.484	0.050	-49.666	0.0E+00	***
Black	-0.643	0.044	-14.676	9.2E-49	***
Asian	-0.323	0.054	-5.952	2.6E-09	***
Hispanic	-0.187	0.077	-2.410	1.6E-02	**
Two or More Races	-0.219	0.094	-2.328	2.0E-02	**
Other Race	-0.466	0.088	-5.267	1.4E-07	***
Female	-0.554	0.024	-23.532	1.9E-122	***
Owns Home	0.479	0.029	16.309	8.5E-60	***
Personal Income (\$0,000s)	0.012	0.001	9.728	2.3E-22	***
High School Graduate or Equivalent	-0.078	0.048	-1.629	1.0E-01	
Some College	-0.114	0.048	-2.359	1.8E-02	**
Bachelor's Degree	-0.065	0.048	-1.336	1.8E-01	
Advanced Degree	0.068	0.051	1.347	1.8E-01	
Language Other than English Spoken at Home	0.379	0.036	10.495	9.1E-26	***

Number of Observations: 104,223

Pseudo R-squared: 0.038

*** = significance at the 0.01 level

** = significance at the 0.05 level

* = significance at the 0.1 level

Source: US Census Bureau (2019), Econsult Solutions (2021)

As noted above, the coefficients represent the probability of someone being self-employed, relative to the probability of the relevant comparison group. In this case, the comparison group is non-Hispanic white males that are not homeowners, have less than a high school education, and do not speak a language other than English at home.

What do these results tell us about business formation rates by race/ethnicity and gender in the Philadelphia region? A few notable observations are relevant to this Availability Study in terms of differences across race, ethnicity, and gender:

- As noted, negative coefficients indicate lower probabilities of self-employment, when controlling for other potentially explanatory variables such as homeownership, income level, and educational attainment. It is therefore notable that all racial, ethnic, and gender categories had negative coefficients, with the largest negative coefficients belonging to Black and Female people. Note also that all of these findings are statistically significant.
- Hispanics were the racial, ethnic, and gender category that had the smallest difference between the comparison group in self-employment rates (i.e. relative to other racial, ethnic, and gender categories, they were more likely to be self-employed). And, speaking a language other than English in the home actually had a positive coefficient, meaning that people for whom that is true are more likely than the comparison group to be self-employed.
- The coefficient associated with income level is positive but very small, while the coefficients associated with various educational attainment levels are either positive but small or negative but small. This suggests that self-employment rates are largely steady across income levels and educational attainment levels.
- Homeownership appears to be strongly correlated with self-employment, with a far greater likelihood of self-employment relative to the comparison group. The relationship between homeownership and self-employment is explored further in the ensuing section on capital access.
- This regression analysis attempted to control for potentially explanatory variables for self-employment, such as income level, educational attainment level, and homeownership. The resulting coefficients suggest that it is not a fully level playing field for women and people of color, as evidence by lower probabilities of self-employment than their comparison group. The next section, on capital access, explores one possible reason for those lower probabilities.

Appendix D: Additional Information on Capital Access Analysis Results

As with differences in business formation rates, differences in capital access exist and are a drag on Availability levels. This can be seen in the existing national literature as well as in a closer look at Philadelphia-specific data.

The national literature is clear that there exist wide disparities in capital access, particularly for Black-owned businesses and woman-owned businesses. Utilizing a very detailed survey data set from the Kauffman Firm Survey (KFS), Alicia Robb¹² has performed multiple rounds of analysis to demonstrate these disparities. In her most recent report, Robb made the following findings:

- Black owners have and therefore contribute half as much in personal equity to contribute to their businesses relative to white owners, and draw upon a pool of inside equity (i.e. from family and friends) that is a fifth of what white owners draw in.
- In addition to worse outcomes when applying for loans, Black owners are three times more likely than white owners to not even apply at all due to assuming they will be rejected.
- Isolating potential explanations for these differences, it appears that they are a combination of disparate capital access at the point of seeking business funding, as well as systemic differences in household wealth and household financial literacy, a point that was mentioned in the previous sub-section.

These findings are consistent with those from a recent report by the Federal Reserve Banks of Cleveland and Atlanta¹³ which returned similar results for Black-owned businesses as well as Hispanic- and Asian-owned businesses, relative to white-owned businesses. Namely, the Fed report found, among minority-owned firms, a higher proportion discouraged from applying for financing in the first place, lower approval rates, and lower amounts approved, all of which led to less capital access, riskier capital access, and reduced business capacity.

With the benefit of geographically granular data on business lending and home lending, we can take a much closer look at capital access disparities in Philadelphia. For business loans, counts and amounts are known by business location, enabling an understanding of the geographic distribution of capital for small businesses in majority minority parts of the city versus other parts of the city. According to the 2019 data, the last year for which a full year of data was available, Census tracts that were more than 50 percent non-white were where about six out of ten people in the city lived, but only received four out of ten business loans (see Figure C.1). Indeed, there is a clear negative correlation between the minority proportion of a Census tract's residential population and the number of loans received by businesses located in that Census tract, meaning that the higher the minority proportion the fewer the loans

¹² Fairlie, Robert W., et al. "Black and White: Access to Capital among Minority-Owned Startups." *National Bureau of Economic Research*, 30 Nov. 2020, www.nber.org/papers/w28154.

¹³ 2016 *Small Business Credit Survey*, Federal Reserve Bank of Cleveland, 29 Nov. 2017, www.clevelandfed.org/en/community-development/publications-by-topic/small-business/about-the-joint-small-business-credit-survey/2016-small-business-credit-survey.aspx.

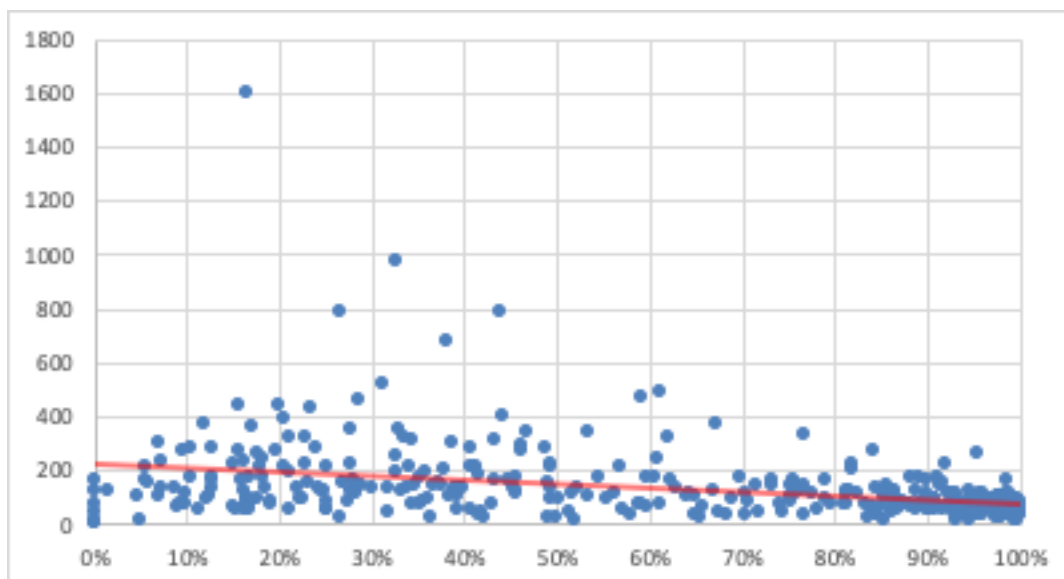
received (see Figure C.2). These data visualizations indicate that business capital access is not presently equitably distributed.

Figure C.1 - Distribution of 2019 Small Business Loans in Philadelphia by Tract Minority Level

	% Population	% Small Business Loans	% Loans to Businesses <\$1 M Annual Revenue
Majority Minority	62.6%	41.5%	42.6%
Not Majority Minority	37.4%	58.5%	57.4%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.2 – Distribution of 2019 Small Business Loans in Philadelphia by Tract Minority Level



Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

The publicly available data also indicate capital access disparities in non-owned-occupied home lending, which is to say lending to landlords. In 2019, Black and Hispanic applicants received far fewer prime loans proportionate to their share of households in the city and represented a higher proportion of the city’s sub-prime loans than the city’s prime loans (see Figure C.3). This means less access to capital and relatively more expensive capital in this particular area of financing. Furthermore, Black and Hispanic applicants also had denial rates three times that of white and Asian applicants (see Figure C.4). Note that this does not take into account the countless Black and Hispanic landlords who choose to not even attempt to apply for financing, which means the disparity in capital access would be even greater.

Figure C.3 - Distribution of 2019 Non-Owner-Occupied Loans in Philadelphia by Borrower Race

	% Households	% Prime Loans	% Sub-Prime Loans
White	45.0%	42.3%	39.2%
African-American	41.2%	15.6%	33.7%
Asian	6.2%	38.5%	19.4%
Hispanic	11.5%	3.7%	7.6%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.4 - 2019 Non-Owner-Occupied Loan Application Denial Rates in Philadelphia by Borrower Race

	# Applications	# Denials	Denial Rate
White	2,573	353	13.7%
African-American	1,449	492	34.0%
Asian	1,850	223	12.1%
Hispanic	390	153	39.2%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Home lending data is also publicly available at a very geographically granular level, and also has the benefit of tracking the race and ethnicity of the applicant. Home lending is, indirectly, an important aspect of business capital access, for at least two reasons. One is that most Americans build wealth through homeownership, so the benefit of building equity rather than paying rent is what enables many to get to a place financially to stomach the financial uncertainties associated with starting a new business. Two is that many business start-up owners directly or indirectly finance their businesses through homeownership, whether using their house as collateral against a loan or borrowing against the house to generate funds for the business. So disparities in home lending will lead to differences in business formation rate, business survival rate, and business growth rate.

Unfortunately, here again, there are persistent racial and ethnic differences in capital access. For all home loans in the aggregate, Black and Hispanic applicants secure a disproportionately low number of prime loans relative to their share of households in the city, represent a higher proportion of the city's sub-prime loans than the city's prime loans, and suffer higher denial rates, relative to white and Asian borrowers. This is also true for each type of home loan, each of which is relevant to the inquiry about disparate business capital access: home purchase loans allow borrowers to build equity, home refinance loans are often used by borrowers to finance the formation or growth of their new business, and home improvement loans are often used by borrowers to expand or enhance their home offices.¹⁴

¹⁴ See Appendix D for additional detail on the distribution of different types of home loans.

Figure C.5 - Distribution of 2019 Single-Family Owner-Occupant Home Purchase Loans in Philadelphia by Borrower Race

	% Households	% Prime Loans	% Sub-Prime Loans
White	45.0%	57.0%	20.4%
African-American	41.2%	22.4%	48.2%
Asian	6.2%	11.7%	13.3%
Hispanic	11.5%	13.1%	18.1%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.6 - 2019 Single-Family Owner-Occupant Home Purchase Loan Application Denial Rates in Philadelphia by Borrower Race

	# Applications	# Denials	Denial Rate
White	8,487	373	4.4%
African-American	3,847	595	13.1%
Asian	1,852	184	9.9%
Hispanic	2,030	198	9.8%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.7 - Distribution of 2019 Single-Family Owner-Occupant Home Refinance Loans in Philadelphia by Borrower Race

	% Households	% Prime Loans	% Sub-Prime Loans
White	45.0%	66.1%	29.4%
African-American	41.2%	21.3%	54.9%
Asian	6.2%	6.4%	3.8%
Hispanic	11.5%	6.2%	11.9%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.8 - 2019 Single-Family Owner-Occupant Home Refinance Loan Application Denial Rates in Philadelphia by Borrower Race

	# Applications	# Denials	Denial Rate
White	7,776	1,218	15.7%
African-American	4,403	1,434	32.6%
Asian	892	214	24.0%
Hispanic	1,136	342	30.1%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.9 - Distribution of 2019 Single-Family Owner-Occupant Home Improvement Loans in Philadelphia by Borrower Race

	% Households	% Prime Loans	% Sub-Prime Loans
White	45.0%	59.0%	50.3%
African-American	41.2%	27.3%	37.9%
Asian	6.2%	8.4%	4.4%
Hispanic	11.5%	5.3%	7.4%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Figure C.10 - 2019 Single-Family Owner-Occupant Home Improvement Loan Application Denial Rates in Philadelphia by Borrower Race

	# Applications	# Denials	Denial Rate
White	2,658	945	35.6%
African-American	2,618	1,519	58.0%
Asian	472	252	53.4%
Hispanic	591	374	62.3%

Source: Econsult Solutions (2021), Federal Financial Institutions Examination Council (2019)

Appendix E: Addition Information on Anecdotal Evidence Collection Results

Bid opportunities and bid awards

- The bid process is onerous and confusing to be worth pursuing.
- [I] Don't understand the bid process or how decisions are made to award contracts.
- The requirements to respond to RFPs are very complicated and time-consuming.
- Larger contractors received large PPP loans giving them the advantage to submit low bids and win contracts. We can't compete with them.
- Larger businesses have more connections and are given preference in bids over smaller firms.
- The City has limited opportunities to contract for specialty services.
- We submit bids but do not receive a response on the bid status. Seems some bids just disappear and are not awarded.
- RFP's are not priced appropriately and results in underfunding and therefore underpaying MBEs. MBEs are not paid what we are worth. Specifying or requiring MBE targets (specifically for black/brown businesses) should be a standard practice yet seems to be inconsistent.
- We have submitted bids and are a qualified WBE but are never selected.
- [I am] Not sure if all opportunities across the City are posted or if they are posted elsewhere. Seems insider knowledge is needed to know about bids.
- All contract awards seem to come down to price and it does not matter how qualified you are.
- We are an open shop and almost all the opportunities have union requirements, so we don't bid.
- [It is] Too difficult to win bids and don't understand how decisions to award contracts are made. Being certified as MBE doesn't seem to help at all.
- [I am] Unsure if there is fairness in the bidding process and how contracts are awarded.
- We need to win larger contracts to be able to scale up our business but have not been successful in getting awards.
- We have to compete directly with larger businesses; being certified with the city does not seem to give us an advantage.
- [I] Would like to do business with the city but don't know where to start.

Connecting with and working with prime contractors

- It has been challenging to win work as a small firm compared to some of the really large firms that compete for the same technical work.
- We want to grow from a subcontractor to a prime but are having difficulty finding a prime we can be a protégé with.
- [It is] Hard to find contracts as a sub-consultant; primes have established relationships and use the same sub-consultants.
- [I] Wanted to expand to become a prime but due to the nature and scope of bids published by the city, we can provide better service as a subcontractor.
- Prime contractors give away lower-skilled professional work to subcontractors and keep higher-skilled professional work in-house.
- The primary difficulty has been actually getting work from the prime contractor once an award has been made.

Payment on invoices from City or from prime contractors takes too long

- [I] Don't trust the City's willingness to pay their debts
- Milestone billing is very challenging for a small business as cash flow is crucial to daily operations.
- The City takes too long to pay invoices, but we will continue to pursue opportunities and bids.

Business location

- Our opportunities are limited because our business is not located in PA and there have been bid requirements that we have to have employees who are PA or Philadelphia residents.
- Usually, large national firms are selected instead of awards going to smaller, local firms.
- [I] Have a full-time office in the city for almost 30 years, pay city taxes, and am no longer being selected as a prime contractor. It doesn't pay any more to keep a local LBE certification and pay city taxes if the city will choose a larger out-of-state company as a prime over an established local business.
- We submitted a bid for a renovation of a city building and the winning bidder for design services was an out-of-town architecture firm. The proposals are a lot of work to put together and it feels wrong if it goes to someone from outside of Philadelphia.

Bid requirements, including bonding and insurance

- [I am] Not sure where bonding falls in the award process and when bonds need to be provided.
- We could do the work required but can't afford the cost of the bonds and insurance required to bid.

Technical assistance or employee issues

- We are having difficulty finding qualified employees since the COVID-19 shutdown.
- [It is] Taking very long to get a City of Philadelphia Tax Compliance Certificate so we can submit bids.
- [Encountered] Issues reciprocating plumbing license in the City of Philadelphia so that we can qualify for work in the city.
- Zoning and L&I are too difficult to deal with and the process takes too long.
- [I] Can't get answers to my business and contracting questions or even a return phone call from city representatives.

MBE and WBE Certification

- [It] Doesn't feel as though being certified has helped us win bids and not sure worth keeping.
- [I] Don't understand the certification process, a tutorial would be helpful.
- [It] Takes too much time and paperwork to apply.
- [I] Don't qualify because we are 50% woman-owned and 50% veteran-owned, neither is 51% to make us eligible.

Recommendations for improving contracting opportunities

- Provide opportunities to meet with decision-makers on contracts.
- Provide more networking opportunities between subcontractors and primes, preferably one-on-one so we can understand how they choose subcontractors and we can promote our qualifications.
- Offer smaller contracting opportunities so there is less competition from larger businesses.
- More technical assistance on growing business, bidding, and how to win contracts with the city.
- Provide information and transparency on how bid awards are made and why a contractor was selected or not selected.
- Give preference in all bids to certified businesses located in the city.
- Explain the advantages and benefits of being certified and how it can help

Appendix F: About Econsult Solutions, Inc. and Milligan & Company

Econsult Solutions, Inc.

Econsult Solutions, Inc. (“ESI”) is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

About Mulligan

Milligan & Company solves the most complex financial, accounting, operational and management challenges for small and medium businesses, public corporations, not-for-profit organizations, government entities and individuals. We meet the goals of our clients in an increasingly demanding regulatory and economic environment. Our commitment to excellence, outstanding client service, dedication and skill of our staff, have all contributed to making us a leader in our profession. Milligan is one of the largest minority-owned CPA firms in the United States with offices in Philadelphia, PA; Baltimore, MD; Cherry Hill, NJ and Washington DC.

ESI **ECONSULT**
SOLUTIONS INC.

economics | strategy | insight

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