

**MAYOR'S ADVISORY COMMISSION
ON CONSTRUCTION INDUSTRY DIVERSITY
REPORT AND RECOMMENDATIONS**

MARCH, 2009



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**MAYOR'S ADVISORY COMMISSION
ON CONSTRUCTION INDUSTRY DIVERSITY**

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EXECUTIVE SUMMARY

Introduction

On March 30, 2008, by executive order, Mayor Michael A. Nutter appointed an 18 member Mayor's Advisory Commission on Construction Industry Diversity to conduct a "comprehensive analysis and review of the construction industry in Philadelphia and the extent to which Philadelphia County minority persons and women were utilized in the workforce" in construction projects in the City. The Commission expanded its mission to also examine the utilization of minority and women owned businesses as contractors or subcontractors in the construction industry. The Commission issued a Preliminary Report to the Mayor and Council President Anna C. Verna on October 1, 2008.

Methodology

The Commission organized into three working committees: *Research, Workplace* and *Contracting*; held numerous full meetings and committee meetings; and, conducted two public hearings. The Commission's research included information from numerous sources including structured interviews and surveys with representatives of the various players in the construction industry. It also reviewed: reports and disparity studies from various cities; articles from scholarly journals and trade journals; demographic and geographic data on and membership data from the building trades; U. S. Census and Bureau of Labor Statistics data; construction project workforce statistics; and, various lists and data on majority, minority and women owned businesses in the construction industry.

Commission Objectives

- The Commission established several objectives for its study and report:
- Develop an understanding of the structure and operation of the construction industry and its principal players;
 - Devise a methodology for determining the availability and utilization of minority and women workers and contractors in the construction industry;

- Ascertain the extent to which minorities and women are utilized and represented in the workforce and as contractors in the construction industry;
- Develop an understanding of the processes, policies and practices through which persons gain entrance into the various labor unions that perform construction work, and how they are ultimately deployed to construction workplaces;
- Identify the policies and practices of project owners, contractors, subcontractors and labor unions that result in the under representation of minorities and women in construction project workplaces;
- Identify the factors and barriers that contribute to the underutilization of minority and women workers at construction workplaces;
- Develop an understanding of the policies and practices through which various contractors and subcontractors are hired to perform the multiple tasks in the construction industry value chain;
- Identify the policies and practices of project owners, contractors and subcontractors that result in the under-representation of minority and women owned businesses in the various contracting opportunities in the construction industry;
- Identify the factors and barriers that minority and women owned businesses confront in the construction industry;
- Articulate the business case for diversity in the construction industry; and
- Recommend to the Mayor, Philadelphia City Council, project owners, contractors, unions, educators and the community as a whole, the best practices, strategies, policies and initiatives for increasing the representation of minority and women workers and contractors in the construction industry.

Diversity and greater inclusion of minorities and women in both the workplace and as contractors in the construction industry is the responsibility of City government, project owners, unions, contractors and subcontractors, educators and the community as a whole. Our recommendations, therefore, speak to what each of these parties should pledge to do to foster greater diversity.

The Commission's findings and 75 recommendations are presented in a written report of over 100 pages. The purpose of this Executive Summary is not to list every recommendation but to describe several major themes of that report. Interested readers

should consult the full report for the complete discussion of findings and all recommendations.

The Case for Diversity in the Construction Industry

The demise of the regional manufacturing sector and the proliferation of low-wage, dead-end jobs in the Philadelphia area have left construction work, particularly union construction work, as one of few promising sources of good wages and benefits that allow workers, without college educations, to support their families. Construction jobs account for 11.0% of all blue-collar jobs, but 38.5% of blue-collar jobs paying wages above \$20 per hour.

Minorities and women are currently underrepresented in the building trades and as construction contractors in the Philadelphia area. In addition to examining the causes of this under representation and making recommendations to remedy it, the Commission believes it is important to articulate the compelling arguments for increased inclusion.

The first argument is one of equity or fairness. Since construction workers receive good pay and benefits and are likely to be in demand in the long run, any segment of the community that does not fully participate in the industry faces starkly reduced economic opportunity. Simply stated, increasing the inclusion of minorities and women in the Philadelphia area construction industry is clearly the right thing to do.

The second argument is one of economic efficiency. Full access to the construction industry is probably one of the most effective ways to help minorities and women move up the income distribution. As they move up, they will pay more taxes and increase their personal expenditures in their communities thereby raising the incomes and qualities of life of others.

The third argument is subtle, but equally important. The Commission believes that at least a part of the reluctance to embrace diversity and inclusion is the misconception that one person's economic progress must come at some cost to another. That is, many believe that in order for minorities in the Philadelphia region to make gains, whites in the region have to lose, but that is not true for three reasons. First, the age distribution of the current construction workforce is such that there will be a large number of retirements in the next 10 years or so. There will be an opportunity to increase

the minority shares of the unions without displacing current white members. Second, the large number of future retirements will heighten the interests of area contractors and building trades unions in recruiting new workers of the highest productivity by extending opportunities to all segments of the population. Finally, we know that a substantial amount of construction work is currently performed by workers coming from outside the Philadelphia region. If more of that work were performed by workers from the Philadelphia area, there would be a second opportunity to increase the minority shares of the unions without displacing current white members.

The Absence of Data

The Commission's effort to assemble the information necessary to understand and measure the inclusion of minorities and women in the Philadelphia area construction industry was hampered by the absence of relevant and reliable data. The Commission recommends that the City work with owners, contractors, and the building trades unions to assemble detailed demographic data on the availability and utilization of minorities and women as construction workers and contractors.

DIVERSITY IN EMPLOYMENT

Inclusion Goals

The Commission recommends that the Mayor, City Council, City departments, agencies, authorities, construction project owners, contractors, unions, and others set common long run goals for inclusion of minorities and women in the construction workforce. Specifically, the Commission recommends a goal of 32% minority participation and 7% female participation in the building trades workforce in the Philadelphia region. These goals are based on the demographic characteristics of men in the regional population who have high school diplomas, GEDs, or some college.

The Role of Owners, Contractors, Unions, and Others

The Commission recommends a number of strategies by which the inclusion goals could be reached. One key insight offered by the Commission is that past discussions of inclusion have focused too narrowly on what unions should do and not taken into consideration the key roles of other critical players in the industry such as construction project owners, contractors, and others.

Unions

- Collect and share demographic data on membership and employment;
- Set long run membership targets of 32% minority male and 7% women;
- Empanel apprentice classes with at least 50% minorities until membership goals are reached;
- Seek other pathways for adding minorities and women to union membership;
- Actively recruit minorities and women;
- Work with community groups and others to reach out to young adults who are prepared to enter apprentice programs; and
- Create mentorship and other initiatives to help minorities and women succeed.

Contractors

- Add minorities and women to their "steady" workforces;
- Work with unions to ensure that work is allocated to minorities and women in proportion to their current shares of union membership;
- Make it clear to their managers and foremen that employing a diverse workforce is a worksite objective and offer incentives for achievement of increased inclusion of minorities and women; and
- Ensure supportive work environments for minorities and women.

Project Owners

- Insist on a diverse workforce and require trades unions and contractors to provide availability and utilization data;
- Make best efforts to contract with minority and women owned businesses to the greatest extent feasible;
- Include enforceable targets for minority and female participation in their contracts with contractors; and
- Insist that contractors provide demographic information about their staff workers, especially their "steady workforce" and documentation of their efforts to increase inclusion of minorities and women workers in all of their projects (City owned and others).

Educators and the Community

- Educators should ensure an adequate number of high quality training programs for youth and young adults, developed in partnership with the unions;
- Educators should help recruit good candidates for building trades membership. Appropriate candidates should be strongly encouraged to consider entering the building trades apprenticeship programs after graduating from high school;
- The Philadelphia chamber of commerce and other business organizations should communicate their support of initiatives to increase the inclusion of minorities and women in the business trades;
- Neighborhood and community organizations should be disseminators of career information regarding union employment and advocates for inclusion; and
- Parents and other family members should help children and young adults develop the values, attitude and work ethic that will allow them to be successful in their work.

City Roles: Oversight, Ownership, and Leadership

Much of the Commission's deliberations focused on what the City (the Mayor, City Council, and City departments, agencies and authorities) could do. The Commission sees many opportunities for City action in three critical roles: *oversight*, *ownership*, and *leadership*.

Oversight

- Improve its data and monitoring systems as a foundation for oversight by assembling data on the participation of minorities and women as construction workers and contractors in the regional economy;
- Develop and update goals for inclusion of minorities and women as construction workers and contractors in the regional construction industry; and
- Prepare quarterly reviews of inclusion data for presentation to the Mayor's Economic Opportunity Cabinet and an annual "Inclusion Report Card" for publication.

Project Owner

- Conduct a baseline analysis of the current participation of minorities and women as construction workers and contractors in its recent construction projects;
- Adopt the long run goal of 32% minority and 7% female participation in the building trades workforce and set achievable goals for participation of male minority, female, and disabled contractors;
- Require bidders on public projects to document their efforts to include minorities and women as workers and contractors in their publicly and privately funded projects;
- Avoid waivers of participation requirements except where genuine good faith is documented;
- Review all post-award changes in roles of minority and women subcontractors and approve only where genuine good faith effort is documented;
- Limit opportunities to use minority and women-owned material suppliers to fulfill minority and female contractor participation requirements; and
- Collect certified payroll data on City projects showing demographic distributions of hours worked and use them to monitor all City construction projects and enforce contractual targets.

Leadership

- Communicate the message that the goals of inclusion and equal opportunity should be standard for both public and private construction projects to owners, contractors, unions, lenders, bonding agencies, and lenders;
- Work with other large construction owners such as universities and hospitals to share information on the participation of minorities as contractors, sub-contractors, and workers;
- Establish a consortium of 10 private sector companies who will institute an economic opportunity plan within their procurement departments to establish and achieve contracting goals; and
- Establish an ongoing Advisory Commission on Construction Industry Diversity which would include union leaders, contractors, contractor associations, public and private project owners and community leaders.

DIVERSITY IN CONTRACTING

The Commission has come to understand that the overwhelming majority of minority, female, and disabled contractors are small, and often new businesses, and that many of the barriers to their participation are those faced by virtually all new and small contractors. Some of these barriers can be lowered. We chose not to make specific inclusion goals for contracting because we lacked the necessary data. Specifically, the Commission recommends that the City and other project owners:

- Unbundle large projects into multiple smaller projects whenever it is possible to do so without significant increases in cost;
- Reduce small contractors' needs for credit by expediting payments to general contractors, requiring expedited payments to subcontractors, and reducing retainage on small projects; and
- Explore innovative ways to reduce the barriers created by bonding requirements including state legislation to allow selective reduction of bonding requirements.

In addition, the City should help nurture minority and female contractors so they can not only survive but prosper and grow. Specifically, the City should:

- Initiate and support a public/private partnership with larger GMs and CMs to develop a mentorship program to strengthen the capacity and enhance the growth of emerging minority contractors;
- Develop a database of all general contractors and construction managers that subcontractors can use to market their services. The database should track current work being bid and identify all forecasted and upcoming projects; and
- Develop a website, similar to FaceBook[®] or MySpace[®], to describe the project experience, capacity and resumes of each certified contractor.

A Shared Commitment to Inclusion

We have addressed this report, not only to Mayor Nutter but also to City Council, the Office of Economic Opportunity, other City departments, unions, contractors, owners, educators, the business community, community-based organizations, and individual citizens in the hope that all of them will consider the steps that we have recommended. We realize that there may be differing views regarding our specific suggestions, but we hope that all who read this report will share our commitment and determination to increase the inclusion of minorities and women in the Philadelphia area construction industry, as both workers and contractors. That shared commitment should be the foundation of a common plan to open up the construction industry to all.



INTRODUCTION

Mayor Michael A. Nutter appointed the Mayor's Advisory Commission on Construction Industry Diversity on March 30, 2008 pursuant to Mayoral Executive Order 5-08. The specific mandate of the Commission was to conduct "a comprehensive analysis and review of the construction industry in Philadelphia and the extent to which Philadelphia County minority persons and women are utilized in the workforce" in construction projects in the city. The Commission is comprised of 18 members and a professional staff representing elected and appointed officials, labor unions, business service organizations, minority and women owned businesses, construction contractors, universities, economic and labor consultants, lawyers and community organizations.

The Executive Order directed the Commission to submit Initial Findings and Recommendations to the Mayor and the Philadelphia City Council by September 1, 2008. Early on the Commission determined that its mission was much broader and more complex than anticipated and that its work could not be completed within that time frame. The Commission submitted a Preliminary Report on October 1, 2008, and the Mayor and the Commission initially agreed to extend its term through January 31, 2009 and subsequently through February 27, 2009. To accomplish its mandate and to be able to recommend effective and practical strategies for greater inclusion of minorities and women in the construction industry, the Commission determined that its work should include an examination of the industry from the perspectives of all key players or participants in the industry. Those players are project owners, contractors, subcontractors, and labor unions. Each of their policies, practices and decisions ultimately determine the *availability* and *utilization* of all construction workers including minorities and women in the construction industry.

In addition to its consideration of inclusion of minorities and women in the construction workforce, the Commission decided to analyze the barriers and challenges that confront minority and women owned construction contractors for two reasons. First, while it is difficult to document with hard data, many observers believe that minority and women owned contractors are more likely to employ minorities and women. Second, increased inclusion of minority and women owned contractors is a worthy goal in its own right.

I. THE WORK OF THE COMMISSION

The Commission was organized into three working committees — *Research, Workplace and Contracting*. Over the past ten months, the Commission has held nineteen full meetings, two public hearings and numerous committee meetings. In addition to the meetings and hearings, the Commission conducted structured interviews and surveys with building trades union leaders, construction contractors, construction project owners, minority and women owned businesses, construction workers, managers of apprenticeship programs, educators and business and political leaders.

The Commission has reviewed and analyzed information from many public and private sources including:

- Reports and disparity studies from several cities and counties in the United States and the City of London, England;
- Membership data provided to Philadelphia City Council in 2007 by 12 building trades union locals of the Philadelphia Building Trades Council;
- Demographic and geographic data on the several building trades union locals;
- Area labor force data published by the U.S. Bureau of Labor Statistics and the U.S. Bureau of the Census;
- Published and unpublished data on construction businesses in the Philadelphia metropolitan area from the U.S. Bureau of the Census;
- Contractor and worker data on City construction projects;
- Lists of contracting firms owned by male minorities and women obtained from the City of Philadelphia and various other government sources; and
- Articles and reports from scholarly and trade journals.

II. PHILADELPHIA CONSTRUCTION INDUSTRY OVERVIEW

A. Philadelphia Labor History¹

The current under representation of minorities and women in the construction industry workforce in Philadelphia is best understood if viewed in historical perspective which provides a backdrop to current debates over access to construction industry jobs. That many minorities and women have gone on to achieve success in the construction trades can be traced directly to the activism of Philadelphians who demanded access to jobs and did not give up based on unfulfilled promises. The construction trades have provided generations of American workers with a high standard of living, pride in quality craftsmanship, and a highly visible legacy of accomplishment. The building trades present an excellent career path for those who do not choose college. Unfortunately, history demonstrates that not everyone has had the opportunity or ability to join this profession. In his seminal exploration of the social and economic condition of *The Philadelphia Negro*, W.E.B. Dubois presents a compelling question that remains current today:

The Question of Earning a Living. For a group of freedmen the question of economic survival is the most pressing of all questions; the problem as to how, under the circumstances of modern life, any group of people can earn a decent living, so as to maintain their standard of life, is not always easy to answer. But when the question is complicated by the fact that the group has a low degree of efficiency on account of previous training; is in competition with well-trained, eager and often ruthless competitors; is more or less handicapped by a somewhat indefinite but existent and wide-reaching discrimination; and finally, is seeking not merely to maintain a standard of living but steadily to raise it to a higher plane---such a situation presents baffling problems to the sociologist and philanthropist.

(DuBois, 1899.)

1. Early History

The history of minority involvement in construction stretches as far back as the founding of this nation, since the very first Africans were brought to toil in the New World. A most visible and enduring contribution of these individuals is the United States Capitol building, and the surrounding broad streets and grand public edifices of

¹ This section was written by Emily Dowdall a graduate student in City Planning at the University of Pennsylvania.

Washington D.C. Indeed, slaves “quarried the stone, cut the timber, and formed and fired the bricks” that comprise our capitol (Allen 2005). Sadly, these historical achievements have been obscured by the record keeping conventions of the time relating to ‘negro hires,’ and a system that regarded slaves as chattel and paid slave owners for ‘rental’ of teams of laborers. Renting slaves was a common practice – George Washington himself loaned out slaves for a fee. Because the capital city was planned for a sparsely populated region, these rental agreements, bringing in scores of the enslaved from all around Maryland and Virginia, accounted for a substantial portion of the project’s workforce. Contributing to the demand for slave labor was the magnitude and grandeur of the planned national capital. The size dwarfed not only the nation’s then-largest city, Philadelphia, but also aspired to outdo central London. A plan to finance construction through the sale of lots in the new city failed to generate sufficient revenue, and rather than scaling back plans, cost-cutting solutions were pursued. In the young United States, cheap labor meant slave labor.

Further limiting knowledge about the extent and character of slave contributions was a tradition that, persisting until quite recently, focused on architects and visionaries rather than those who made those plans rise from the ground. As a result, the stories of the Germans, Irish, and other Europeans brought in from across the Atlantic as low-wage workers, often under exploitive indenture arrangements, were also ignored. Putting slaves to work next to these whites also served as a mechanism to “keep affairs cool,” as “white laborers tended not to express dissatisfaction with their pay or working conditions knowing that slave labor could replace them” (Allen 2005).

African-American contributions were primarily concentrated in the most grueling and dangerous activities, with teams of slave saw-workers, for example, kept busy seven days a week. The owners were paid for six days of labor, and the workers themselves were permitted to keep the wages for the seventh day. Thus their inhumane work schedule did provide some slaves the opportunity to save money towards purchasing extra comforts or in some cases their own freedom.

A key exception to the rule of low-skill work was carpentry. While most laborers benefited little from their forced participation in erecting the nation’s symbols of democratic power and freedom, the work “provided some blacks with the opportunity of

acquiring skills such as carpentry that eventually could lead to a change in their economic status.” Apart from the construction of Washington D.C.’s buildings, “slave carpenters were both necessary and numerous” on sprawling plantation operations (Allen 2005). Skilled slaves passed on carpentry knowledge, creating a substantial pool of African-Americans with skills that would remain in high demand as the country continued its rapid growth. In 1791 Benjamin Banneker, the free African-American who was a self-taught mathematician and astronomer, played a significantly more esteemed role when he was hired under the auspices of Thomas Jefferson as a surveyor for the construction of the nation’s capital.

A committee of the Pennsylvania Society for Promoting the Abolition of Slavery studied, among other things, the employment of African-American residents of Philadelphia in 1838. The Society’s report identified eighty-eight occupations held by Blacks, including carpenters, plasterers, cabinet makers, painters and glaziers, plumbers and bricklayers. The comment, which followed the catalogue of trades, is timeless in its poignancy:

From the preceding list, although we are aware that the greater part of them are engaged in the most menial services and severest labors, yet it appears that almost all the branches of business pursued by the whites, are, to a small extent, carried on by them: showing that, under more favorable circumstances, they would be competent to undertake any branch of active industry. But here, as in many other particulars, they are met by the prejudices with which they have to contend... which render it “difficult for them to find places for their sons, as apprentices, to learn mechanical trades.”
(Pennsylvania Society for Promoting the Abolition of Slavery 1838)

2. Turn of the Century Philadelphia

Following Abraham Lincoln's issuance of the Emancipation Proclamation in 1863, the population of African-Americans in Philadelphia increased from 2,500 to 40,000 by the addition of the sons and daughters of new freedmen from the South. Between 1790 and 1820, the majority of artisans of any race in Philadelphia had been Black, a result of slaves acquiring trades skills. As the general population of Philadelphia increased in part by the influx of White immigrants, so also did the competition for jobs and the need for new types of skilled labor. African-Americans, who once dominated the skilled trades in Philadelphia, were virtually excluded:

Here was a mass of black workmen of whom very few were by previous training fitted to become the mechanics and artisans of a new industrial development; here, too, were an

increasing mass of foreigners and native Americans who were unusually well fitted to take part in the new industries; finally, most people were willing and many eager that Negroes should be kept as menial servants rather than develop into industrial factors.... Soon the white workmen were strong enough to go a step further than this and practically prohibit Negroes from entering trades under any circumstances; this affected not only new enterprises, but also old trades like carpentering, masonry, plastering and the like. The supply of Negroes for such trades could not keep pace with the extraordinary growth of the city and a large number of white workmen entered the field....Thus partially by taking advantage of race prejudice, partially by greater economic efficiency and partially by the endeavor to maintain and raise wages, white workmen have not only monopolized the new industrial opportunities of an age which has transformed Philadelphia from a colonial town to a world-city, but have also been enabled to take from the Negro workman the opportunities he already enjoyed in certain lines of work.
(DuBois 1899)

Where the number of African-Americans in a particular trade such as iron-work was relatively considerable, African-Americans found opportunities. In other skilled trades, with fewer African-American representatives, their exclusion from trade unions was blatant; racial prejudice was marshaled as a means of foreclosing competition and thus increasing wages of white workers.

A surge in demand for workers in the 1910's and 20s helped to mitigate prejudicial hiring practices, at least temporarily. "The years surrounding World War I are widely recognized as a watershed in the economic history of African Americans" as wartime production gave way to the Roaring 20s (Maloney 2002). However, while "Blacks had made some gains in construction jobs after World War I, these were soon undone by the impact of the Great Depression as craft union policies became more rigid" (Waldinger and Bailey 1991). Compounding the effects of economic crisis was the fact that "As the northern black population grew, racial tensions clearly increased....These increasing racial tensions may have limited the economic gains of African Americans" in the years leading up to World War II (Maloney 2002).

3. The Civil Rights Movement and Labor in Philadelphia

In the 1930s and 1940s Franklin D. Roosevelt's New Deal Coalition famously brought together the white working class and African-Americans, as blacks left the party of Lincoln to join the Democrats. Yet from the beginning tensions arose between whites seeking job protection and African-Americans seeking new access to employment. At times these tensions resulted in violent confrontations that were similar to the Civil War

draft riots between Irish immigrants and African Americans. Overall the years following World War II saw substantial, though not radical, changes in race relations and civil rights. Ultimately efforts to achieve equal opportunity in the 1940s and 50's were muted as decisive action yielded to a "gradualist racial liberalism" aimed to keep the often-fragile coalition intact through incremental rather than immediate change (Sugrue 2004).

While political leaders were reluctant to push too quickly for equal rights and failed to deliver on many promises of social and economic justice, there were some notable achievements. A. Philip Randolph, the African-American leader of the International Brotherhood of Sleeping Car Porters union, was able to leverage the threat of civil unrest to persuade President Roosevelt to sign Executive Order 8802 in 1941. The Fair Employment Practices Committee (FEPC) was thus created, the first agency to directly address civil rights since Reconstruction in the 19th century. Congress disbanded the agency only five years later and though its direct impact was limited, the FEPC was a foundation for subsequent efforts, as activists turned to state and local governments to end employment discrimination.

In Philadelphia, where black votes were becoming more valuable, City Council enacted a fair employment practices ordinance (FEP) in 1948. A revision in the City of Philadelphia's 1951 Home Rule Charter created an enforcement mechanism in the shape of the Commission on Human Relations (CHR), which was tasked with investigating FEP violations; and also mandated that every publicly bid contract "shall contain a provision that in the performance of the contract the contractor will not discriminate nor permit discrimination against any person because of his race, color, religion or national origin." During this time, the Quaker-affiliated American Friends Service Committee (AFSC), the Committee on Equal Job Opportunity (CEJO), and the Philadelphia branch of the Urban League engaged in non-confrontational efforts to move minorities into 'breakthrough' jobs in the public eye. Some activists dismissed the accomplishments of this period as 'tokenism' and called for more immediate and sweeping change in workforce access.

The story of the Philadelphia chapter of the National Association for the Advancement of Colored People (NAACP) illustrates the rift that grew between "the old guard" and a new generation of leaders in the city. In the late 1950s the NAACP had

become a “relatively conservative organization...preferring behind-the-scenes negotiation,” which changed drastically when Cecil B. Moore, a prominent Philadelphia trial attorney, seized the reins in 1962, with promises for “aggressive, protest-oriented” strategies (Sugrue 2004).

By the early 1960s the local chapter of the Congress of Racial Equality (CORE) had joined the NAACP in ratcheting up the intensity of rhetoric and action, leading protests targeting the building trades and their supporters in public office. Historian Thomas Sugrue writes, “Their strategy was ingenious. They targeted an industry notorious for racial homogeneity at its most vulnerable point: its dependence on government largess” (2004). The Urban Renewal programs of the 1950s and 60s had essentially created a federally subsidized construction boom in Philadelphia and other cities. At this point Urban Renewal activities were drawing ire from people displaced under eminent domain for the massive projects; those who re-dubbed the program “negro removal” were further incensed by the lack of a black presence on the substantial workforce engaged in these government funded projects.

Records show that during this period more than 10% of the city’s black male population had some experience in the construction industry – mostly in non-union low-skilled tasks with little means for professional advancement. Exclusion of black males from union work was due to twin factors of racial prejudice and the traditional “legacy” structure of the skilled trades: legacy meant that skills and union memberships were passed down from fathers to sons or other relatives, staying within families and within neighborhoods, creating a situation of de facto racial exclusion. White union members often perceived minority participation as a threat to their own economic welfare and responded with varying degrees of hostility.

In many instances racism played an explicit and sometimes vicious role in keeping minorities out of the union halls and off construction sites. Some supervisors openly refused to hire African-Americans even if they carried a union card and many jobseekers encountered harassment or threats like “You forced your way in here, I’ll get you out” (Sugrue 2004). Philadelphia’s Negro Trade Union Leadership Council, whose members were drawn from racially mixed unions, called for increasing black participation in apprenticeships and skilled trades but with tepid success.

In the spring of 1963 the brutality witnessed during civil rights demonstrations in Alabama galvanized Philadelphia leaders. Demonstrators took to the streets to call attention to racial exclusion on publicly funded construction projects, most notably the new Municipal Services Building (MSB). In the first of a series of high profile protests CORE picketed the home of Philadelphia Mayor James Tate in April of that year. In response the mayor ordered a CHR review but did not halt construction on the MSB project. Seeking more decisive action, demonstrators held a sit-in inside the Mayor's offices in mid-May, staying for 21 hours and ensuring that Tate could not ignore the issue at home or at work. The Mayor eventually ordered all MSB work to stop until the City could be assured that employment opportunities were provided to black workers. White counter-protestors decried the stoppage as unproductive and an unfair threat to their own livelihood. Just months later, the NAACP and Cecil B. Moore, worked with CORE to picket a school construction site on 31st and Dauphin Streets in the Strawberry Mansion section of the City, which was a black neighborhood. The fact that unions still failed to hire minorities for a project located in a minority community was perceived as particularly galling, and huge crowds turned out to protest.

In response to the MSB protests in Philadelphia and similar discontent in other U.S. cities, President John F. Kennedy issued Executive Order 11114 in June 1963. The Order called for not-yet-defined affirmative action considerations on all construction employment under federal contract. But protests continued in Philadelphia and additional cities including Cleveland, Ohio and Newark, New Jersey. The national level leadership of the AFL-CIO finally responded and as a result of that pressure nearly all the local union chapters signed onto promises to recruit and train black workers. The national organization was often more progressive than its local affiliates at that time, and some union leaders simply believed that offering voluntary training and recruitment efforts would stem the call for quotas.

In 1965 President Lyndon B. Johnson's Executive Order 11246 created the Office of Federal Contract Compliance in the Department of Labor (OFCC) to provide administrative sanctions for those construction firms that failed to comply with affirmative action mandates. In 1966 and 1967 a series of four policy experiments wrestled with these issues directly. Slightly different plans were devised for and deployed

in four American cities that had seen serious protests over the preceding years. The St. Louis Plan and the San Francisco Plan were implemented in 1966, the Cleveland Plan and the Philadelphia Plan in 1967.

The Philadelphia Plan, which was able to incorporate some of the lessons learned in the other three cities, emerged as the most potent, although it also featured highly contentious percentage-based quotas. President Johnson, however, took no further action on the issue, leaving the final decision-making to the next administration. Assistant Secretary of Labor, Arthur Fletcher, appointed by President Nixon, revised the Philadelphia Plan in 1969 in view of his findings that nepotism and discrimination prevented skilled Philadelphia African-Americans from job opportunities in federal government contracts (Fletcher 1974). President Richard M. Nixon announced a final version of the Philadelphia Plan, which included numerical targets for employment of minority construction workers and which served as the model to be replicated across the country. In 1970 the Philadelphia Plan was extended to all contracts issued by the federal government for more than \$50,000. An amendment in late 1971 added requirements for women. The numerical goals, which are 17.3% for minorities (Philadelphia Region) and 6.9% for women, have not been revised since 1980 but remain in effect for all such federally assisted contracts (Booker 2008).

There was an equally strong voice coming from community activists and leaders, calling for inclusion of minorities in major construction projects in Philadelphia. As early as the late 1970s, community activists like the Rev. Henry Nichols and Omjasisa Kentu in North Philadelphia, and Novella Williams and the Rev. Shaw in West Philadelphia called for inclusion in major construction projects. Universities in Philadelphia, beginning with Temple University and later the University of Pennsylvania, were sites of particular attention, with both community activists and local elected officials calling for local participation as well as inclusion. Rev. Nichols, a trustee at Temple, called for as much as 33% minority inclusion in construction projects, while the Rev. Shaw participated in Penn's minority inclusion projects as part of the University's West Philadelphia Initiatives in the mid 1990s.

4. Women and Labor

The Coalition of Labor Union Women (CLUW) was founded in 1974 by female trade unionists. At that time, “union women, particularly those of color, had little room to maneuver for influence, and the women’s movement seemed tone deaf to their needs,” (Roth 2003). Of course, women had long been part of the construction business, though they were not highly visible and often denied full participation. Lenore Janis, President of Professional Women in Construction (PWC), pointed out that traditionally many small construction enterprises “were mom-and-pop businesses, but Mom was always well hidden in the back room while Pop was the construction gang overseer and the one who showed up in public to negotiate or shake hands or sign contracts” (Greene 2005). Since PWC began with about a dozen women in 1980 it has grown to more than six hundred members, including individuals of both genders as well as corporate members. The organization provides information on construction trends in seminars and networking events (Greene 2005).

Women in construction have long allied themselves with other historically marginalized groups. For example, CLUW is just one of six organizations affiliated with AFL-CIO serving the underrepresented. The others are the A. Philip Randolph Institute, the Asian Pacific American Labor Alliance, the Coalition of Black Trade Unionists, the Labor Council for Latin American Advancement, and Pride at Work. The AFL itself has come a long way; in 1995 Linda Chavez Thompson became Vice President and the first female and the first Latina to hold executive office in the organization. Shortly thereafter, the Working Women’s Department was founded.

Much of the groundwork for women’s participation and equal treatment in construction and other manual labor is attributed to the Women’s Bureau (WB) in the U.S. Department of Labor, which was headed by Alexis Herman in the late 1970s. The WB worked with contractors and international unions to design curricula and materials designed to prepare women for this particular work. In Philadelphia, resources were poured into information services including video production, conferences, and partnerships with unions and local and state agencies. Women in the industry began forming support groups to discuss the issues they faced (Riordan 2008).

5. Open Shop Policies

The history of labor in this country has been imbued with pride but also fraught with tension. Conflicts have centered on wages and hours, recruitment and exclusions, and language and philosophy. Proponents of ‘open shop’ or ‘merit shop’ labor policy seek to curtail policies that require union membership or favor union card-carriers over non-union workers. Open shop supporters point to the historic exclusion of minorities and women as evidence that promoting labor unions has also meant perpetuating discrimination and marginalization. Tony Brown asserts that the 1931 Davis-Bacon Act mandate for a ‘prevailing wage’ created “Set aside jobs for whites...designed to prevent efficient, ‘cheap, colored labor’ from competing with more costly white workers” (1995). Still others have concluded that there is no evidence that open shop and waiver of prevailing wage laws improve the position of minorities in the building trades, but rather prevailing wage laws increase minority access to well paid employment and job training. (Belman and Voos 1995)

6. Going Forward

History provides a backdrop to current debates over access to construction jobs. That many minorities and women have gone on to achieve success in the construction trades can be traced directly to the activism of Philadelphians who demanded access to jobs and did not give up until there was solid evidence of change. Conversations about the construction industry and unions, and about minority and gender diversity throughout the industry, will only become more complex in the context of a deepening global economic downturn, failed U.S. immigration policies, and the pursuit of environmental sustainability. The past contributions of women and minorities merit recognition even as plans are made to ensure that today and tomorrow the construction industry will not only provide all citizens with a high quality, safe, and enjoyable built environment, but will also provide workers from all backgrounds with the opportunity to serve in this crucial sector of the economy.

B. Players in the Construction Industry

The construction industry is a diverse and complex business sector, and the Commission concluded that its efforts to increase inclusion must be informed by a clear understanding of how it operates. We also concluded that our work and recommendations would not be appreciated without an explanation of the role of the key industry players in determining availability and utilization of minorities and women. The key “players” in the industry are project owners, general contractors, construction managers, subcontractors, construction workers, unions, and material suppliers.

1. Project Owners

An owner, simply defined, is any public, non-profit or private sector entity that owns or leases a property and has a programmatic requirement for space that requires the construction of a new building or the renovation of an existing structure. An owner can own a single residential property or be a large institution owning hundreds of buildings. Public sector entities include federal, state, county and local governments and authorities; non-profit owners include colleges and universities and medical institutions; and private sector owners include residential, industrial and commercial developers.

While there are legal differences in how public and private sector owners procure the services necessary to complete construction projects, the relationship between the players is essentially the same. The project owner hires and assembles a design team, consisting of architects and engineers, who will design the building and prepare the technical contract documents that will govern the construction project. The owner secures financing for its project and establishes the project scope of work and the budget before the builder is hired. As will be discussed below, the builder can be either a general contractor or a construction manager. The owner has a critical role to play in determining whether a construction project has minority and women participation goals for businesses and workers. The owner can require its contractors and their subcontractors to respond to participation goals or other affirmative measures that the owner may require on the project. One of the owner’s many prerogatives is to establish goals for the inclusion of minority and women design professionals, contractors and

subcontractors, and construction workers. Most public sector owners are required by various legal provisions to set minority and women participation goals and many non-profit and some private sector owners do so voluntarily, especially if their projects require some public funding or other incentives. Apart from these inclusion matters, there is a typical process for the utilization all of the players in the construction industry.

The larger owners of multiple buildings have on-going capital programs that utilize project managers to oversee their design and construction projects. The project managers are either in-house employees of the owner or consultants commonly referred to as owner representatives. The basic responsibility of the project manager is to deliver a quality project on time and within budget. The project manager hires the design team to develop the programmatic space requirements and develop the design. Once the design of the project is approved by the owner the design team creates the contract documents, a highly detailed set of construction plans and specifications. These are not only the guidelines on what is to be constructed but also the basis of the final contract between the owner and the builder. The builder plays a pivotal role in what is referred to as the “Triangle” which also includes the owner and the design team. This metaphor is used to describe the three players who are typically in conflict with each other -- each player is constantly positioning themselves and their company in order to avoid and mitigate risk and protect their budgets and profitability.

The owners, design team, and project managers are responsible for establishing the bid documents and guidelines and standards for the project bidding or proposal process. Once the construction documents are completed, the bidding process begins. The bid process is conducted as either an open and advertised public bid if it is being issued by a governmental entity or by invitation only if it is issued by a private owner. The latter approach, given its discretionary nature, underscores the importance of marketing and previous relationships in the decision to utilize a given player. The outcome in both scenarios is that a pool of contractors or construction managers is established for the bid list and a bid date is established for when the construction bids are due. The contractors or construction managers then competitively bid the construction documents to the community of specialized subcontractors before submitting final bids to the owner.

2. General Contractors

The general contractor is a builder in the traditional sense. Historically the company was comprised of employees who learned a trade and learned the building industry by working their way up through the ranks of the company. Many of the larger more established companies are privately held by owners who inherited their company from the previous generation. These owners were brought up learning the business from within the company. The general contractor typically self performs some portion of the work with its own forces. General contractors tend to bid lump sum/hard bid projects more frequently than taking on the role of the construction manager.

With the emergence of the construction management companies as discussed below, many of general contractors, in order to compete, expanded their services to include construction management services and began to hire educated professionals to augment their staffing resources.

3. Construction Managers

Construction managers as builders are relatively newcomers in the construction industry. Their companies tend to be comprised of white collar, educated employees. These employees typically have backgrounds in engineering and construction management degrees. The construction manager is typically retained by the owner during the design process. The rationale is to hire a firm with professional construction expertise to help guide the design, provide early estimates to the owner and design team to ensure that the design is within the established budget and to provide constructability reviews. While the construction manager is paid a professional fee for his services, the justification to spend the money early in the process is that they mitigate financial surprises during the bidding process and during the coordination of the packages in the field.

While construction managers go through a similar bid process as the general contractor, the bid is arrived at and assembled much differently. The construction manager will typically provide the owner and design team a budget during various stages of the process called the schematic, design development, and construction document phases. Since the construction manager has been involved early on and has reviewed and

estimated these documents several times and had input into the design and engineering, his familiarity with the thought process and the constructability intent gives them a better insight of the actual cost of the bid. Therefore construction managers are in a better position to assemble the lowest bid than a general contractor who did not participate in the early stages and who is given several weeks to assemble the lowest bid which is often based solely on the set of drawings provided by the design team.

The bid process happens much the same way with regard to subcontractors, but often these subcontractors will also have bid the project during the estimating phases and also have a fairly good knowledge of the project and its scope as well.

4. Subcontractors

During the bidding process the general contractor or construction manager will solicit as many bids from subcontractors across all of the divisions in the Construction Specifications Institute (CSI) work categories included in the bid. Even though the general contractor or construction manager must deliver the lowest bid price on bid day in order to win the project, he also knows that he must mitigate as much risk as possible if he does win the project. The subcontractors who are invited to bid are often those with whom the contractor has worked previously and successfully. Most often the contractor will only invite bids from subcontractors who have performed well in the past and have proved that they are financially strong enough to complete their work on time and within budget. A contractor also selects subcontractors who can adequately perform based on the size of the subcontract and their manpower availability.

The other variables that are considered on bid day besides the lowest subcontractor bids are:

- The subcontractor's financial status and ability to finance the job while waiting for payment from the owner;
- The subcontractor's work ethic and expertise as it relates to meeting the schedule without too much hand holding by the general contractor;
- The subcontractor's ability to staff the project in order to meet the schedule;
- The subcontractor's understanding of the full project scope, including all of the cost in their initial bid;

- The general contractor and subcontractors must have a good working relationship and be able to solve problems efficiently and cordially in the field.
- The subcontractor must be willing to coordinate with the other trades on site.

On bid day the subcontractors submit their bids to the contractors. Each contractor bidding on the project assembles a bid sheet which includes the lowest responsible bid in each subcontracting category. The subcontractors who have the lowest price and have proven that this price includes all of the work contained in the construction documents are included in the contractor's price. Each contractor then submits their bid to the project manager who then reviews each bid with the owner and the design team. They collectively determine the lowest responsible bidder and award the contract. Once the construction contract has been awarded to the contractor, the contractor will award subcontracts to the individual subcontractors. The subcontractors then hire the labor force to construct the project.

5. Construction Workers

Construction workers are an independent labor pool of both skilled and unskilled trades people. Union construction workers are members of national or international trade unions and their associated locals. Each union specializes in a particular trade such as carpenters, electricians, painters, glaziers etc. Construction workers are typically hired by contractors and specialty trade subcontractors to perform work on construction sites. Some construction workers are fortunate to be employed for many years by the same company. Others may work for many different companies in their career if they do not develop an ongoing relationship with a particular company or if they work for smaller companies who cannot carry a steady pool of workers.

Typically subcontractors have labor crews that are permanent employees who they take from job to job with them. In order to make money, a subcontractor must have highly efficient crews who can construct a quality job as quickly as possible. All construction workers must market themselves to the subcontractors to get employed. Once they are hired they must constantly prove their worth. If the subcontractor runs out of work the workers must market themselves to other subcontractors or go back to the

union hall to be placed on a list. The hiring policies are different across the various unions. Most unions have “open solicitation” in which workers are allowed and expected to seek their own work from contractors. In some cases, workers must be referred by the union.

6. Unions

Historically, many construction workers have joined labor unions, often called building trades unions, defined by their skills and where they work. There are locals of 15 international building trades unions in the Philadelphia region.² Overlaying 13 of those national unions is the National Building Trades Division of the AFL-CIO (all but the Carpenters and the Operating Engineers); the Philadelphia area locals of the 13 internationals are affiliate members of the Philadelphia Building and Construction Trades Council. The Carpenters and Operating Engineers are non-affiliate members of the Philadelphia Building and Construction Trades Council.

The central activities of the union locals are collective bargaining with union contractors and the organization of non-union contractors. Collective bargaining agreements specify wages and benefits of apprentices and journeymen, work rules, allocation of work among members, and the funding and operation of apprentice and other training programs.

The Commission has explored similarities and differences among the building trades unions. Those unions are often discussed as if they were a single monolithic body, but they are, in fact, discrete organizations with their own policies and practices and different levels of inclusion of minorities and women. It is also true, however, that there are many similarities among the unions with regard to the processes of entry to membership and allocation of work among apprentices and journeymen. Maximization of opportunity for underrepresented populations must be approached through strategies designed for each union’s circumstances, policies and rules. For this reason, a major

² The 15 unions are Bricklayers Local 1, Carpenters Regional Council of Philadelphia, Cement Masons Local 592, Electricians Local 98, Elevator Constructors Local 5, Insulators Local 14, Ironworkers Local 401 and Local 405, Laborers Local 332, Operating Engineers Local 542, Painters D.C. 21, Plumbers Local 690, Roofers Local 30, Sheetmetal Workers Local 19, Sprinkler Fitters Local 692, and Steamfitters Local 420.

undertaking of the Workplace Committee was to interview union officials to determine how each union works – necessary groundwork for recommending tailored change.

7. Material Suppliers

The majority of the work on a construction site is performed by the subcontractors. They provide the labor and material for their particular trade. Subcontractors purchase their materials (e.g., drywall, metal studs, lighting fixtures, plumbing supplies) from suppliers. Utilizing minority and woman owned suppliers has become popular with contractors and subcontractors as an avenue to accomplish their diversity goals. While this does benefit the owner of the supply company it does not support job creation or the hiring of minorities and women on the job site.

C. The Construction Industry in the U.S. Economy

The national construction industry generated \$1.07 trillion in revenues in 2008. The construction industry is an equally important part of the private economy of the Philadelphia region. According to the Associated General Contractors of America (AGCA), each \$1 billion of construction activity adds \$3.4 billion to the U.S. Gross Domestic Product (GDP), about \$1.1 billion to personal earnings and creates or sustains 28,500 jobs. In 2005 (the latest year for which all data are available), the industry was responsible for 4.9% of all private sector output and 4.6% of all employment in the Philadelphia area. The corresponding national shares are 5.6% of private sector output and 5.5% of all employment, so the construction industry makes up a somewhat smaller part of the regional economy than of the national economy.

However measured, the construction industry's share of the regional economy understates its true importance. With the demise of the manufacturing sector of the regional economy and the proliferation of low-wage, dead-end jobs, construction jobs, particularly union construction jobs represent the best hope for well paying jobs and benefits that allow workers to support their families.³ Construction jobs account for 11.0% of all blue-collar jobs and 38.5% of blue-collar jobs paying wages above \$20 per

³ In the metropolitan Philadelphia area, the 2007 average construction wage was \$23.48 – significantly above the living wage of \$17.11. (Swanstrom 2008 at 15)

hour. Simply put, union construction jobs are good jobs and are among the best paying jobs available in large numbers to people without a college education.

Approximately 9% of the construction work in the 11-County Philadelphia Metropolitan Statistical Area (PMSA) is performed by contractors whose businesses are located in the City of Philadelphia. That figure underestimates the percentage of construction work in the 11-County PMSA that is performed in the City because the volume of construction done in the City by contractors located outside the City is surely larger than the volume of construction done outside the City by contractors located inside the City.

Another way to describe the intra-regional distribution of construction activity is with employment data from the 2000 U.S. Census. In 2000 roughly 22% of those working in construction trades in the 9-county area (Bucks, Chester, Delaware, Montgomery, Philadelphia, Burlington, Camden, Gloucester, and New Castle Counties) were working on job sites in the City of Philadelphia.⁴ Appendix 1 shows the percentages for all 9 counties. The Census data do not allow us to determine what portion of the 22% of work was performed by residents of the City of Philadelphia. We can, however, determine the Philadelphia residents' share of all construction workers who reside in the 9-county area, which is 20%.⁵ The 20% figure can be compared with the Philadelphia residents' share of the entire population residing in the 9-county area, which is 26%.⁶

Several sectors of the regional economy are dependent on the construction industry including construction industry material suppliers, fabricators, and construction-related professional services such as project management, architecture, interior design, and engineering firms. Other related sectors are real estate development companies, construction and labor attorneys, safety professionals, accountants, information

⁴ The 22% figure and the other percentages in Map were calculated by Econsult Corporation from the Special EEO Tabulation of 2000 Census data published by the U.S. Census Bureau (http://www.census.gov/hhes/www/eoindex/page_c.html).

⁵ Calculated by Econsult Corporation from the Special EEO Tabulation of 2000 Census data published by the U.S. Census Bureau (http://www.census.gov/hhes/www/eoindex/page_c.html).

⁶ Calculated by Econsult Corporation from 2000 Census data published by the U.S. Census Bureau (<http://www.census.gov>).

technology and construction related software products, financial institutions, insurance companies, and bonding companies.

As is true of all the sectors of the economy, the construction industry has been severely impacted by the current recession. Construction has declined in the public and private sector and hundreds of thousands of employees who depend on the construction industry have lost their jobs over the last six months.

Many of the larger general contractors and construction managers grew significantly during the building boom of the last 10 years. Now that all of the large projects that secured funding in better economic times have been completed, there are very few big projects in the pipeline. Many of the projects which have been on the drawing boards have been canceled due to lack of construction financing. Many of the construction financing institutions have shut down their lending departments. The outcome is that most of the larger general contractors and construction managers have had significant lay offs with more projected to come.

While larger companies will downsize their workforces, it is inevitable that highly leveraged firms will close their doors or file for bankruptcy. This trend has already begun in Philadelphia. Larger companies are aggressively seeking to bid on smaller projects. There is more competition for work among the small to mid size companies. Contractors and sub contractors are bidding work with minimal profit margins just to secure projects to keep their people employed. For smaller contractors, the risk of failure increases if there are no financial reserves within the contractor's price.

There is concern that the current recession will wipe out the smaller, less financially stable minority and women owned contractors, subcontractors and suppliers. Some of the unions are reporting the highest unemployment rates in the last ten years with a significant amount of men "sitting on the bench". Other unions' leaders reported that they are fine for now, but concerned about the coming year.

While the construction industry may be suffering in the current recession, there are three reasons to expect a strong construction industry in the longer term. First, recessions end, even bad ones. Second, unlike many jobs, those in the construction industry are not going to be threatened by import competition because they are almost impossible to outsource to offshore businesses. Finally, and most importantly, the

Congress adopted and President Obama signed a \$789 billion economic stimulus plan that recognizes the need for large public investments in infrastructure – roads and bridges, transit systems, utility systems, schools, and other public buildings – all of which will require construction workers and contractors to build them over many years. The need for new construction of infrastructure will likely continue beyond any infrastructure stimulus package that will be implemented during the current recession. The stimulus plan will also support the creation of green jobs; the City plans a massive weatherization project that will train and employ new workers.

D. The Case for Diversity in the Construction Industry

The Commission was appointed because of the overwhelming actual and anecdotal evidence that minorities and women are currently underrepresented in the Philadelphia area building trades and as construction contractors. In addition to examining the causes of this under representation and making recommendations to remedy it, the Commission thought that it was important to articulate the compelling arguments for inclusion.

The first argument is one of equity or fairness. Since construction workers receive good pay and benefits and are likely to be in demand in the long run, any segment of the community that does not have the opportunity to participate fully in the industry faces starkly reduced economic opportunity. The worst impact will be on those who have not completed 4-year college degrees. Simply stated, increasing the inclusion of minorities and women in the Philadelphia area construction industry is clearly the right thing to do.

The second argument is one of economic efficiency. Full access to the construction industry is probably one of the most effective ways to help minorities and women move up the income distribution chain. As they move up, they will pay more taxes and increase their personal expenditures in their communities thereby raising the incomes and quality of life of others. This prospect is particularly appealing for Philadelphia County where 23.8% of the population lived in poverty in 2007 (compared to the national rate of 13.0%) because we know that minority households and female-

headed households have substantially higher poverty rates than white households and households containing an adult male. (U.S. Census Bureau 2008)

The third argument is subtle, but equally important. The Commission believes that at least a part of the reluctance to embrace diversity and inclusion is the misconception that one person's economic progress must come at some cost to another. That is, many believe that in order for minorities in the Philadelphia region to make gains, whites in the region have to lose, but that is not true for three reasons. First, the age distribution of the current construction workforce is such that there will be a large number of retirements in the next 10 years or so. The demographic bubble of baby boomers is starting to retire from the building trades and thereby creating large numbers of openings that will have to be filled with younger people. There will be a need to bring substantial numbers of new people into the building trades unions during that period, so there will be an opportunity to increase the minority shares of the unions without displacing current white members. Second, the large number of future retirements will heighten the interests of area contractors and building trades unions in recruiting new workers of the highest productivity by extending opportunities to all segments of the population. In sum, it is difficult to imagine a better time to begin a robust effort to enhance the diversity of the construction industry. Enhancing diversity will support local economic growth. Finally, we know that a substantial amount of construction work is currently performed by workers coming from outside the Philadelphia region. If more of that work were performed by workers from the Philadelphia area, there would be a second opportunity to increase the minority shares of the unions without displacing current white members.



III. EMPLOYMENT IN THE CONSTRUCTION INDUSTRY

A. Availability and Utilization of Minority and Women Workers

The level of participation of minorities and women in the construction workforce is a function of their *availability* and *utilization*. Persons are typically characterized as being available for work in the construction industry if they are interested in and prepared for work in a particular craft in the industry. Availability of workers in a particular race, ethnicity, or gender group in a particular labor market area is defined as *the proportion of all interested and prepared workers in that area who belong to that specific group*. For example if there were currently 1000 workers who were interested in and prepared for work in a particular geographic area, and 300 of them were African-American, then the current availability of African-American workers in that trade in that area would be 30%.

In the employment context, utilization can refer to employment of available workers or to admission of available persons to union membership. The utilization of available minorities and women depends on collective bargaining agreements, project labor agreements, union policies and practices regarding membership and work referral, contractor and subcontractor policies and practices regarding worker selection, sponsorship and retention, contractor policies regarding selection of subcontractors, and project owner policies and practices regarding participation of minorities and women as contractors, subcontractors, and workers. Utilization of a race, ethnic, or gender group can be defined in many different ways, several of which are discussed below.

Valuable insights may be derived from comparisons of utilization with availability. Whenever the utilization of a particular group of workers or contractors is significantly lower than its availability, there is a concern that current racial, ethnic, or gender discrimination may be the explanation. For example, if the availability of minorities in a particular craft is 30%, but the utilization is 15%, it is reasonable to explore the causes for this seeming under representation. There are a number of possible explanations such as methodological problems with the measures of utilization and/or availability,⁷ or the differences may have occurred by chance.⁸ There could be more

⁷ We discuss measurement of availability and utilization below.

⁸ There are well established statistical methods that can tell us whether a discrepancy between utilization and availability is so large that it would be extremely unlikely to have occurred by chance.

substantive explanations including intentional and unintentional discrimination by unions, contractors, or owners. In any event, any unexplained shortfall of utilization relative to availability should raise concerns and inspire efforts to raise utilization.

In studying the construction industry workforce, the Commission has been hampered by limited data on minority and women participation in the building trades. The only trade for which data exist to fully illustrate minority participation is the Operating Engineers which was generated as the result of a 37-year lawsuit against Local 542 (no comparable data exists on women even in that trade). *See* Section C below. Aside from the union membership data provided by most of the building trades to City Council in December 2007, few reliable quantitative measures currently exist that could inform our deliberations, particularly on the issue of the extent of employment of the minorities and women who are currently members of the unions. While we have attempted to improvise that information, one of our strongest recommendations going forward is the better development and collection of data on minority and women membership and employment.

1. Measuring the Availability of Workers

As noted above, availability of workers in a particular race, ethnicity, or gender group in a particular labor market area is defined as *the proportion of all interested and prepared workers in that area who belong to that specific group*. Availability should be defined specifically with regard to *time frame, geography, skill, and preparation for skill acquisition*.

Time Frame

With regard to time frame, it is helpful to consider short-term, medium term, and long-term measures of availability:

- Short-term availability measures should reflect the minorities and women who are currently *interested in and prepared* for jobs in the construction industry. This group would include journeypersons who are currently members of the building trades unions and non-members who currently have the interest and skills necessary to do the work of journeypersons. These are the people who are currently *prepared* to do the work of journeymen. They are clearly interested in such work as evidenced by the

facts that they have put forth the effort required to acquire the relevant skills and they have actually worked in the industry.

- Medium-term availability measures should reflect the minorities and women who are currently *participating in apprentice programs or other programs to learn construction skills*. If and when they successfully complete those programs, they will become part of the group who are available in the short-term. These are the people who are currently *being prepared* to do the work of journeymen. They are clearly interested in such work as evidenced by the fact that they are putting forth the effort required to acquire the relevant skills.
- Long-term availability should reflect the minorities and women who would be *interested* in construction careers and *prepared to learn the skills required* for jobs in the construction industry if there were no barriers to their participation. These people would want to and be prepared to enter apprentice or other construction training programs, where they would become part of the group who are available in the medium-term, and if successful, part of the group who are available in the short-term. Preparation can be defined in terms of the educational attainment and physical capability required to enter apprentice or other construction training programs.

Geography

The geographic dimensions of availability are defined in terms of where people work or where people live. Our focus is on where people work for three reasons:

- The goal is to define the geography of the construction labor market, that area within which people seek and obtain work in the construction industry;
- The bargaining units of the building trades unions are defined on the basis of work location; and
- Some of the U.S. Census data that are most relevant to the Commission's analyses are available only on the basis of work location, not residence location.

With a focus on work location, we have considered different groupings of those locations. One approach is the 11-County Philadelphia Metropolitan Statistical Area (PMSA) shown on the map in Appendix 2. A Metropolitan Statistical Area is a

conceptually appealing definition for a labor market area because “the general concept of a Metropolitan Statistical Area ... is that of an area containing a recognized population nucleus and adjacent communities that have a high degree of integration with that nucleus.” (Office of Management and Budget 2000)

Some of the U.S. Census data that are particularly useful for our purposes are not available for the 2 smallest counties in the PMSA, which are Salem County in New Jersey and Cecil County in Maryland. When using those data, our analysis is limited to the remaining 9 counties. Fortunately, Salem and Cecil counties are arguably the least integrated with the remaining 9 counties in the PMSA.

The Philadelphia Building Trades locals cover parts of or all of the 11 counties in the PMSA. Each local has a “geographic footprint,” or an area within which the local represents union members working in its trade. Maps of the “footprints” of many of the locals are found in Appendix 3. In those maps, the 11 counties in the PMSA are outlined in red, and the boundaries of the footprints are shown in black. It should be noted that the locals’ footprints are often very different from one another. For example, the region covered by Operating Engineers Local #542 is much larger than the area covered by Electricians Local #98. Because minorities tend to be concentrated in particular geographic areas, the variation in footprints of the locals may imply varying availability of minorities across unions. Because men and women have roughly the same residential distribution, geography is not relevant to the consideration of availability of women for construction jobs.

There is another implication of the variation in footprints. In assessing availability of minorities in the PMSA, it is necessary to consider more than one local of some of the unions. For example, there are three locals of the International Brotherhood of Electrical Workers that have footprints within the PMSA.

Skill

Journeypersons are differentiated by the nature of their skills. The skills of a plumber are different from the skills of a cement mason, which are in turn different from the skills of a sheet metal worker or an ironworker. The skills of the various building

trades are typically learned over several years through a combination of classroom and on the job training.

Preparation for Skill Acquisition

A prerequisite to learning the skills required of a building trade is a foundation of academic skills and so-called “soft skills” such as self-discipline and the ability to communicate with others. While different building trades have somewhat different entry requirements, almost all trades require new apprentices to have a high school diploma or GED degree. Some new apprentices have completed some college course work, but very few have 4-year college degrees.

Individuals sometimes enter pre-apprentice programs as a way to acquire the academic and other skills that they lack. Others, who already have the necessary skills, may look to these programs for guidance or assistance in gaining admission to apprentice programs.

2. Measuring Short Term Availability of Workers

Measures of short-term availability should reflect the minorities and women who are currently interested in and prepared for jobs in the construction industry. This group includes` journeypersons who are currently members of the building trades unions and non-members who currently work as journeypersons in non-union workplaces. The second group is currently available for non-union construction work and could be immediately available for union construction work if they were to become members of the relevant unions upon demonstrating their skills.

There are two sources of data on short-term availability:

- Membership data provided by many of the Philadelphia Building Trades Unions; and
- Data from the 2000 U.S. Census.

Membership Data from the Philadelphia Building Trades Unions

Almost all large construction projects in the City of Philadelphia, and many in the surrounding counties, are conducted by unionized contractors, so union membership is an important feature of construction worker availability for those projects. Data on membership of minorities and women were submitted to Philadelphia City Council by many of the City's building trades unions.⁹ In many cases, those data included separate demographic breakdowns for journeypersons and apprentices, while in other cases the two groups were reported as one. *See Appendix 4.*

The membership data reveal considerable variation in the percentages of the union members who are minorities. That variation raises the question of why some unions have so many minority members, while others do not. There are several possible explanations:

- Different geographic footprints of the locals;
- Different requirements for admission to apprentice programs;
- Different minority interest in membership; and
- Different historical owner, employer, and/or union discrimination (intentional or unintentional) against minorities.

To what extent do the different geographic footprints of the locals explain their different levels of minority membership? To examine this question, we have used the definitions of the geographic footprints of the building trades locals (discussed above) along with demographic data from the 2000 U.S. Census to estimate the race and ethnicity distributions of the populations that live within each footprint. Using Census data for the Census Tracts within the footprint of a particular local, we computed the African-American, Hispanic American, Asian American, and Other Minority percentages of the population residing in each footprint. Those percentages, which are displayed in Appendix 5, provide useful benchmarks for consideration of the membership data.

When we compare the data from 12 unions with the Census data, we find that nine unions have minority membership percentages that are lower than the minority percentages computed from the Census data. The three exceptions are the Cement

⁹ It should be noted that we have no way to verify these data.

Masons, Laborers, and Roofers. The African-American percentages follow the same pattern except, possibly, for the Roofers for whom the African-American percentage was not reported. One might expect the minority percentages of the population to be correlated with the percentages of local membership – that is, other factors being equal, a local with a footprint containing a larger minority population might be expected to have a larger minority membership but that does not appear to be the case. *See* Appendix 6.

The data on women percentages are more similar across unions. The Laborers union is the only union reporting more than a very small number of female members. As noted above, men and women have roughly the same residential distribution, so geography is not likely to be relevant to the consideration of availability of women for construction jobs. For this reason we have not computed women shares for the locals' footprints.

Demographic Data on Construction Occupations from the 2000 U.S. Census

The U.S. Census Bureau publishes data from the 2000 Census on the demographic distributions of people working in various construction trades in each of the counties in the 9-County area described above.¹⁰ It should be noted that these data *include both union and non-union workers* in each trade, but the data cannot be disaggregated into union and non-union groups. *See* Appendix 7.

Similar to union membership data, the data from the 2000 Census reveal considerable variation in the percentages of the construction workers who are minorities. One possible benchmark for comparison is the minority share of the labor force in the 9-county area, which was 32% according to the 2000 Census. Two of the trades (the Cement Masons, Concrete Finishers, and Terrazzo Workers and the Construction Laborers) have minority percentages that are close to that benchmark, but the rest of the trades are substantially below it. Again, the variation raises the question of why some trades include many minority members, while others do not. Because the data are all for the 9-county area, the variation in minority participation cannot be attributed to different union footprints. There are several possible explanations including:

¹⁰ Data are not published for Salem County New Jersey and Cecil County Maryland because of the relatively small populations in those counties.

- Different requirements for admission to apprentice programs;
- Different minority interest in membership; and
- Different historical owner, employer, and/or union discrimination (intentional or unintentional) against minorities.

3. Measuring Medium Term Availability

We are aware of only one source of data on medium-term availability across the building trades¹¹, which is the apprentice membership data provided to Philadelphia City Council in December 2007 by some of the Philadelphia Building Trades Unions. *See* Appendix 8.

In every case for which apprentice data have been supplied, the minority share of apprentices is larger (in several cases substantially larger) than the minority share of journeypersons. That pattern, along with the reasonable assumption that the minority presence is lower among older journeypersons than among younger journeypersons, suggests that the minority percentage of journeypersons will be higher in the future, if minority and non-minority apprentices complete the apprentice programs at comparable rates.

The data for women apprentices is less encouraging. The Sprinkler Fitters union is the only one reporting women percentages of apprentices that is 2 or more percentage points above the women percentage of journeypersons (2.5% vs. 0.0%).

4. Measuring Long Term Availability

Long-term availability should reflect the minorities and women who are *prepared for and interested in learning the skills required* for jobs in the construction industry, that is, the people who both want to and are qualified to enter apprentice programs in the building trades.

¹¹ As noted above, as a result of extended litigation, extensive data on the operating engineers are available, and those data include counts of apprentices.

Preparation

A high school diploma or a GED degree is required to enter almost all apprenticeship programs. However, not all people who have diplomas or GEDs are educationally prepared to enter apprentice programs. We believe, however, that it is reasonable to assume that, among those who have earned those degrees, there are no significant differences in educational preparation across racial, gender, or disability groups.

There is also a physical dimension to preparation that should be considered. To succeed in apprentice programs, one needs to have some degree of coordination and physical strength that could be, but often is not, objectively defined. (Examples of objective definitions from other occupations are the physical tests that have been developed to screen applicants for firefighter jobs.) Currently, only one of the Philadelphia Building Trades unions does any formal testing of the physical abilities of those seeking to enter apprentice programs. Ironworkers Local 405 administers a dexterity test for its incoming apprentices. There is widespread informal testing in the sense that some apprentices turn out to be unable to perform the work of their chosen trades. At least one union, the Sheetmetal Workers, has an explicit policy that members should be able to lift 50 pounds, but no formal testing is currently done.

Whatever the physical requirements may be, we believe it is reasonable to assume that among men, there are no significant racial differences in the percentage of men who can meet them. There may, however, be gender differences in the percentage who can meet the physical demands of some or perhaps all, of the building trades. The Commission is not aware of any statistical evidence on this point.

Interest

Based on past experience, research evidence on career choice, and our structured interviews with union officials, we found that the group of people interested in apprentice programs is *unlikely to include*:

- people who have earned 4-year college degrees or graduate degrees;

- people who are not in the labor force (neither working nor seeking work);¹² and
- people who are 35 years old or older.

We think it is reasonable, therefore, to exclude those three groups from measures of availability for apprentice programs. Because apprentices tend to be fairly young, we would prefer a somewhat lower age cut-off (e.g., 30), but the relevant data are published only for the 16-19 and 20-35 age groups.¹³ Arguably the 16-19 age group should be included. If they are high school graduates in the labor force they are probably in the older end of the 16-19 range and, therefore, legitimate candidates for apprentice programs, but we know from our union interviews that there are relatively few applicants who are in their late teens and early twenties.

Based on the preparation considerations and the interest considerations discussed previously, it is reasonable to limit our attention to the under-35 labor force with high school degrees or some college. See Appendix 9, which displays race, ethnicity, and gender data for this group showing that 32% of the under-35 labor force with high school degrees or some college are members of minority groups.

The final step in measuring availability is to consider whether, within that group, there are likely to be racial, ethnic, or gender differences in interest in careers in the building trades. There are several theories and some research on the issue of interest in specific occupations and how it is shaped, in part, by past and current discrimination. If the older generations of minority populations had difficulty entering an occupation because of discrimination, then there are fewer role models to shape the aspirations of the next generation. Furthermore, if young people anticipate discrimination in any particular occupation, they may decide it is not sensible to put forth the effort required to seek a career in that occupation. In employment litigation, this phenomenon – called the “chilling effect” – is recognized as a reason why minorities and/or women may be underrepresented among groups of job applicants.

¹² As defined by the U.S. Bureau of Labor Statistics, the labor force includes both those who are working (the employed) and those who are not working but are seeking work (the unemployed).

¹³ It is doubtful that a lower age cutoff would yield a substantially different demographic distribution.

When considering long run employment goals, focus should be on *long-run benchmarks for a world with no discrimination* where there would be plenty of role models, and no chilling effects. There are currently no data for such a world, because it does not exist, but it is the world to which most of us aspire, and we believe our long-run goals should assume that we will get there. In such a world, we think that racial and ethnic differences in occupational interest would be trivial or non-existent. If that is true, the minority percentage of those who are prepared for and interested in learning the skills required for jobs in the construction industry will be the 32% reported above.¹⁴ This result does not depend on the percentage of the group who are interested in construction careers; it depends only on the assumption that the percentage is the same across racial or ethnic groups.¹⁵ It is our view that the best, available, long run goal for minority participation among men in the construction trades is the 32% figure discussed above, which estimates the percentage of the male population who are prepared and, based on a reasonable assumption, would be interested in careers in the construction trades.

As is the case for men, not all women who have completed high school or some college are necessarily prepared to learn and perform the skills required for jobs in the construction industry. Because of physical requirements, however, it may not be reasonable to assume that the prepared percentage of women who have completed high school or some college is the same as the prepared percentage of men who have completed high school or some college. Further, it may not be reasonable to assume that the level of interest in construction work among prepared women is the same as that among men. Because of these issues the Commission has had difficulty setting a numerical goal for participation of women in the construction workforce. The Commission does believe that female participation could and should be increased from its current level. As an interim strategy, the Commission suggests basing a long-run goal of

¹⁴ Of course the absolute number of people who are interested and prepared must be less than the number who are prepared, because some of the prepared will have no interest. For benchmarking purposes, however, percentages are more useful and more important than absolute numbers.

¹⁵ For example, if 10% of minorities in the under-35 labor force with high school degrees or some college and 10% of non-minorities in the under-35 labor force with high school degrees or some college were interested in construction careers, then 3.2% of the specified labor force (10% of 32%) would be interested minorities. That 3.2% would equal 32% of all interested people. Alternatively, if 20% of minorities in the specified labor force 20% of non-minorities in the specified labor force were interested in construction careers, then 6.4% of the specified labor force (20% of 32%) would be interested minorities, and that 6.4% would equal 32% of all interested people.

7% for participation of women based on the 6.9% goal established by the U.S. Department of Labor in 1980 (this goal remains in effect) for female utilization in all federal and federally assisted construction contracts in excess of \$10,000.¹⁶

B. Utilization of Minority and Women Workers

Minorities and women must become union members in order to access union jobs, so paths to union membership are critically important. Union membership, however, is only the first step toward full participation, because full-time employment in the building trades is illusive for many union members. Minorities and women also need to find work proportionate to their white and male counterparts, or they will find themselves “on the bench” (under-employed).

Utilization of available minorities and women depends upon collective bargaining agreements, project labor agreements, union policies and practices regarding membership and work referral, contractor and subcontractor policies and practices regarding worker selection, sponsorship and retention, contractor policies and practices regarding selection of subcontractors, and project owner policies and practices regarding participation of minorities and women as contractors, subcontractors, and workers. Utilization of a race, ethnic, or gender group can be defined in many different ways. By looking at utilization measures one can get a more complete understanding of where there are barriers that limit inclusion of minority and female workers. It should be noted that not all of the measures discussed in this section are currently available, but they could be obtained through a cooperative effort of unions, contractors, and owners.

The Commission was not able to access any demographic data on the distributions of the following groups:

- New apprentices;¹⁷
- Graduating apprentices;¹⁸ and

¹⁶ The Commission recognizes the invaluable information submitted by Kathleen Riordan, Board Member of the Philadelphia Chapter of the Coalition of Labor Union Women and former Regional Administrator of the Women’s Bureau of the U.S. Department of Labor, and believes that further study of the employment of women in the building trades is warranted.

¹⁷ We have demographic data on all currently active apprentices in eight of the building trades union locals that were displayed in Appendix 8, but we lack data on newly empanelled apprentices.

- Hours worked by apprentices and union and non-union journeymen.

Demographic data in these categories are essential in determining utilization. Such data, if compiled, would be in the possession of the various building trades unions. The Commission recognizes the possible reluctance of some unions to provide such information if they compile it, and we have no authority as an advisory group to compel its production. In fact, the Commission rigorously debated the efficacy of recommending that the City attempt to compel the compilation and production of such data. Much of this debate centered upon the unions' status, as private organizations, to maintain sensitive records of race and gender for the purpose of addressing underrepresentation in membership. Some argued that pension records of union members, held by separate legal entities affiliated with each union, already contain such data, so the unions should be willing to publicly disclose this information. Others believed that any requirement to compel the disclosure of this information would ultimately undermine efforts to gain the cooperation of some unions.

The Commission did reach consensus that without the collection of any demographic data, it would be virtually impossible to recommend realistic benchmarks for increasing minority and female membership. Two alternative approaches to data collection were fostered:

1. Each union could provide data on each member's race, ethnicity and gender on a confidential basis to the Philadelphia Building Trades Council. The Council could then aggregate the data across the participating unions and submit the total racial, ethnic and gender numbers in each category with a list of the participating unions; or
2. Each union should assemble data on members including each member's race, ethnicity and gender along with his or her aggregate number of hours worked. Each union engaged in public sector construction should (and also to the extent

¹⁸ Again, we have demographic data on all currently active apprentices in eight of the building trades union locals, but we lack data on those who have recently completed their apprenticeships and become journeymen.

required by private sector owners), on an annual basis, provide a report on its apprenticeship, journeyman, outreach, hiring and deployment practices.

Either approach could provide the City a benchmark against which to measure future progress in including minorities and women in the construction industry workforce, but the Commission was unable to agree on the choice between them. The Commission recommends that for the future, the Mayor should request that the individual unions and contractors compile this data on an annual basis which would then be submitted, whether in aggregated or disaggregated form, to the Office of Economic Opportunity.

C. A Case Study of Availability: Operating Engineers Local 542

1. History of the Local 542 Litigation

There is one building trade union in the Philadelphia region with an experience with the inclusion of minorities that is quite unlike the others: Local 542 of the International Union of Operating Engineers. Local 542 and its apprenticeship program have been defendants in race discrimination litigation that began in 1971 and continues to the present – a period of 37 years. Although Local 542 is only one union, and a relatively small one at that, its experience is instructive because of the extensive efforts made to reverse the exclusion of minorities in the trade and the availability of solid data on the membership and employment of minorities that does not exist for the other trades. The Local 542 experience shows how challenging the integration of a building trade union can be.

Operating engineers are the construction workers who operate heavy equipment, such as dirt movers (bulldozers, backhoes) and cranes. Local 542 represents the operating engineers employed by the unionized contractors in Delaware and the eastern part of Pennsylvania. Its District 1 is the five-county Philadelphia area (Philadelphia, Bucks, Chester, Delaware and Montgomery Counties).

A race discrimination class action lawsuit was filed against Local 542 and the contractors employing its members in 1971.¹⁹ The primary goals of the litigation were to increase minority membership in the union and to increase the number of hours worked by minorities to mirror the proportions of minorities in the local labor economy. In 1978 and after a year-long trial, the Honorable A. Leon Higginbotham, Jr. found Local 542 liable for having engaged in intentional, class-wide racial discrimination.²⁰ Judge Higginbotham also held that the contractors who relied on Local 542's hiring hall for workers were liable.²¹ The holding against the employers, though, was ultimately reversed by the United States Supreme Court,²² and the contractors were dropped from the case.

Following the court's finding of discrimination, Local 542 was placed under court oversight, with court-ordered goals for minority membership, hiring hall referrals, and hours worked, among others. In 1985, Judge Louis C. Bechtel, to whom the lawsuit was transferred after Judge Higginbotham was appointed to the Third Circuit Court of Appeals, found the union in contempt for failing to meet the goals and for continuing to intentionally discriminate based on race and ruled that the goals and court oversight would continue.

With the court's injunction scheduled to expire again in 1987, the plaintiffs and the union negotiated a consent decree providing for continued remedial efforts through 1989. An improvement in the union's compliance with the goals had begun after the 1985 finding of contempt, and it continued through 1989. Indeed, this period marked the high point of minority participation in the union. By April 30, 1989, the union had substantially complied with virtually all of the provisions of the 1987 agreement, except that it was not meeting the hours worked goal for minorities in the Philadelphia-area District 1. The Special Master assigned to oversee the case investigated the causes of the shortfall and ultimately determined that it was not the product of ongoing discrimination

¹⁹ Local 542 has not been sued for sex discrimination, so female membership and employment has not been a focus of the litigation.

²⁰ Pennsylvania and Raymond Williams, et al. v. Local 542, et al., 469 F. Supp. 329 (E.D. Pa. 1978), aff'd, 648 F.2d 922 (3d Cir. 1981) (en banc).

²¹ Id. at 401-13.

²² General Building Contractors Association v. Pennsylvania, 458 U.S. 375 (1981).

by the union, but rather was a present effect of past discrimination. Judge Bechtle declined to extend the injunction which established the membership and employment goals, and for a time, court supervision of the union ended.

On May 5, 1993, Judge Bechtle issued an order in which he stated that the court had received several written complaints from members of the union concerning discrimination against minorities and directed the Special Master to investigate these allegations. After an extensive investigation, the Special Master issued a report in 1994 in which he concluded that though he did not find any intentional discrimination by the union during the four-year period during which the case was inactive, many of the reforms that had been instituted in the litigation and many of the improvements in minority membership and hours worked had been rolled back.

Since the 1994 report, the most significant efforts of the Court, the Special Master and the parties to the lawsuit have focused on increasing minority affiliation and hours worked. When Judge Bechtle retired, the case was reassigned to Judge James T. Giles. Upon Judge Giles' recent retirement from the bench, the case has been reassigned to the Honorable Joel H. Slomsky.

During the course of the litigation, the goals for minority participation in both membership and employment in District 1 of Local 542 have been derived from census data of working-age minorities in the five-county area. The goals derived from the 1980 census have been used by the parties from 1988 to date to measure the union's progress with respect to minority hours worked and membership in the union. In District 1, the goal for both minority membership and minority employment has been 21.1%.²³

2. Efforts to Increase Minority Membership in Local 542

Minorities cannot enjoy their fair share of construction work unless there are enough skilled union members to do the work. For that reason, one of the key goals of the litigation was to increase minority membership in Local 542 to their anticipated level in the local labor economy.

²³ Had these goals been updated using 2000 census data for the five-county area, they would have increased to 26.45%.

In Local 542, new members traditionally entered the union through various practices. The apprenticeship program was only one of these entry methods and accounted for a relatively small percentage of new members. Many new members came in through testing their proficiency on several pieces of construction equipment. Some entered through the union's organizing of non-union contractors. Large numbers became Local 542 members through transfers from the union's "C-Branch," a division for workers who operate heavy equipment in non-construction settings (such as landfills). Persons who entered union membership through C-Branch were particularly likely to be non-minorities.

As a result, the court sought ways to bring an infusion of minorities into the union, both to remedy prior discrimination and to offset entry methods that tended to disproportionately bring in non-minorities. The primary strategy chosen was a court-ordered training program, called the "101 Program" (named for the number of the court order establishing the program), which supplemented the traditional apprenticeship program. While the apprenticeship program lasted four years, the 101 Program provided 26 weeks of training to 176 minorities who became Local 542 members.

In the short run, the 101 Program seemed to be a success. When the case temporarily ended in 1989, minorities constituted 24.65% of Local 542 membership, well in excess of the goal of 21.1%. Moreover, the 101 graduates had work at the time of the program, because it corresponded with a construction boom (particularly the construction of the "Blue Route"), and because special efforts were made by the union to connect the new members with work that would provide family-sustaining income and foster development of their skills.

However, the long-term results of the 101 Program were far more mixed. To be sure, many program graduates remain in the union, and some are very successful. However, the Special Master's 1994 report stated that 80 of the 176 graduates were no longer union members – a 60% loss of these new minority members. Of the 70 graduates who were still active in the union, only 26 were working at the time of the report. The Special Master attributed the loss of the new members to lack of work. There had been an economic downturn since court supervision had ended, and the union had not made efforts to help these new members maintain their still young careers as operators.

Since the Special Master's report, the most significant efforts by the court and the parties have been to increase minority membership through the apprenticeship program. Judge Giles ordered Local 542 to conduct special minority classes of its apprenticeship program, not permitting non-minorities to join the union through its District 1 class since 2003. Between 2003 and 2006, 74 minority apprentices were inducted in District 1. The union did not induct apprenticeship classes in District 1 in 2007 or 2008, citing lack of work opportunities as a result of the weak economy.

Currently, minorities comprise 340 of the 1834 members in District 1, or 18.45%. Without question, this percentage of minorities is among the highest of the Philadelphia-area building trades. However, the percentage is still significantly below the 1980 census-derived goal of 21.1% and much less than the 26.45% figure from the 2000 census. Also, it reflects almost four decades of intense efforts to rid Local 542 of the effects of racial discrimination. In fact, the current percentage of minorities in the union is lower than the 20.55% that existed in May 1993, when the court resumed active monitoring of the litigation. This story shows that increasing minority membership in the building trades is not accomplished without great tenacity.

3. The Impact of the Litigation

This section details experiences related to the employment of minorities who became members of the union. In short, the consistent experience throughout the litigation has been, and remains, that minorities work at significantly lower percentages than their membership in the union; in other words, they are underemployed, compared to non-minorities.²⁴

During the high point of the litigation (1987-1989), extensive efforts were made to deal with the underemployment of District 1 minority members. Most notably, a very effective incentive called "controlled solicitation" resulted in many minority employment opportunities. Controlled solicitation permitted contractors with percentages of minority hours meeting the employment goal to hire whomever they chose (minority or non-minority), instead of having to accept referrals from Local 542's then-exclusive hiring

²⁴ Employment in Local 542 is measured through hours worked as reported by contractors to Local 542's pension and welfare fund.

hall. In addition, efforts were made by the hiring hall to refer minorities to jobs that were anticipated to be long-term.

Despite these unusual efforts, when the consent decree ended in 1989, the percentage of minority hours worked stood at 19.34%, short of the goal of 21.1%. The Special Master investigated the causes of the shortfall and concluded that the shortfall was not the result of ongoing discrimination by the union, but was a present effect of past discrimination, which had resulted in lesser seniority and skills by the minorities who had recently graduated from the court-ordered 101 Program.

By the time that the case was reopened in 1993 (four years later), minority hours worked had dropped to 13.97%. The Special Master noted that this low percentage of minority hours worked had last been seen in 1985, when the union was in active contempt of the court's orders. He determined that the reason for the large decline in minority employment was that during difficult economic times, contractors employ only their "steady employee workforce" and that a disproportionate number of minorities in the union were not steadily employed. While he did not find evidence of intentional discrimination during the period that the case was closed, he did conclude that the drop in hours were present effects of discrimination in the 1970s.

Plaintiffs' counsel believes that there is another significant reason for the precipitous drop in minority hours. During the period in question, Local 542's collective bargaining agreement was fundamentally changed with respect to how work is assigned. Instead of a hiring hall based system controlled by the union, the rules were changed to allow unlimited solicitation, by which contractors can hire whatever union members that they choose. Minorities have not fared well in this free-for-all by which jobs are now acquired.

Over the last several years, Judge Giles and the Special Master's primary strategy to increase minority hours worked has been a "sponsorship" program. The participants are minorities who are willing to attend the union's training site to enhance their operating skills on four or five pieces of equipment while unemployed. The bargain offered is that after training site staff certifies a volunteer as fully proficient on multiple pieces of equipment, the Special Master seeks to place that operator in a long-term job that hopefully would lead to that person becoming part of the contractor's steady work

force. Unfortunately, the program's results have been minimal. Few minorities have completed the training requirements, and even for those who have, almost no long-term work has been found for them.

The percentages for minority hours worked at present are nothing short of discouraging. In District 1, the 1980 goal for hours was 21.1%. Through May 2008, the most recent period for which membership data is available, minority membership in District 1 stood at 18.54%. But for the most recent Decree Year ending August 2008, the minority hours worked were 13.56%, the lowest level since 2004. The significant gap between minority membership and minority hours worked indicates widespread underemployment of District 1 minority operators.

This underemployment is emphasized by analysis of the shortfall of hours that minorities would have worked if their hours of work had mirrored their membership in the union. The figures below are for the year ending August 31, 2008:

- Total hours worked by all operators: 2,826,929.4
- Total hours worked by minority operators: 385,575.3
- Expected minority hours worked (based on 18.54%): 524,112.7
- Shortfall of minority hours: 138,537.4

Although these 138,537.4 hours doubtlessly reflect underemployment, rather than total unemployment among minority operators, one way to conceptualize the magnitude of this shortfall is to divide the number by 2,000 hours – the number of hours generally thought to constitute full-time work. This calculation reveals that the 138,537.4 hour shortfall is the equivalence of having over 69 minority operators totally unemployed for the entire year, which would amount to over 20% of the minority membership of District 1. After 37 years of litigation, a great deal of progress clearly remains to be made.

These numbers are instructive as efforts are made to increase minorities' participation in the other building trade unions. Numbers of minority members must be increased for minority communities to have hope of obtaining a proportionate share of the work. However, increasing membership does not itself solve the problem. The new minority members also need to obtain their fair share of the work. If they do not find enough work to sustain their families, they will be forced to leave the trades, as happened

with large numbers of the minorities brought into Local 542 through the court-ordered 101 Program.

The history of the Local 542 litigation illustrates how valuable insights were derived from solid demographic data on union membership and hours worked. The Commission believes that similar insights could be drawn if such data were available for all of the building trades unions.

D. Pathways to the Trades

There are several paths of entry into the building trades. The most common path into the *unionized* building trades is apprentice programs that are conducted jointly by the unionized contractors and the building trades unions. Another path, which is not uncommon, is the unionization of the employees of formerly non-union contractors. The other path, which is currently much less traveled, is the admission of individual non-union journeymen to union membership through what is often called “Challenge Testing.”

Skilled *non-union* construction workers follow other paths, which typically involve some combination of trade schools and on-the-job training. There are a number of barriers that individuals encounter as they seek to enter the building trades. Those barriers clearly include lack of information, lack of preparation, limited sizes of apprentice classes, and lack of personal connections. In the past, there has also been discrimination arising out of intentional and unintentional discrimination by contractors and unions.

1. Pre-Apprenticeship Programs and Trade Schools

Many individuals enter pre-apprentice programs to prepare themselves to enter apprentice programs or non-union employment. The Diversity Apprenticeship Program (DAP) operated by Laborers Local 332 is one example of such a program. The Piney Grove Baptist Church in Philadelphia operates a tutorial program for men and women who are 18 years of age and older. The program, which meets two nights each week, is designed to reach out to the community to make them aware of the opportunities

available in the building trades. Volunteer instructors teach math, spatial relationships, and reading comprehension. An experienced building trades journeyman mentors the students in the program, encouraging and supporting them as they seek to enter any of the building trades apprentice programs. *See* Appendix 10 for a list of other programs.

2. Union and Contractor Apprenticeship Programs

The Commission devoted considerable effort to learning about the building trades apprentice programs. The Commission toured training facilities and conducted structured interviews of officials of building trades unions, representatives of building contractors, and representatives of private and public construction project owners to gain a better understanding of how people come to apprentice programs and what happens in the programs.

Thirteen unions were interviewed: Bricklayers Local 1, Cement Masons Local 592, Elevator Constructors Local 5, Insulators Local 14, Ironworkers Local 401, Ironworkers Local 405, Laborers Local 332, Painters D.C. 21, Plumbers Local 690, Roofers Local 30, Sheetmetal Workers Local 19, Sprinkler Fitters Local 692, and Steamfitters Local 420.²⁵ In almost every case, the union’s business manager and the union’s apprentice coordinator participated in the interview. Interviewees received the interview questions in advance, and interviews lasted 60 to 90 minutes. *See* Appendix 11. Representatives of eight contractors were interviewed: Bittenbender Construction, Dale Construction, L.F. Driscoll Co., Haverstick Borthwick Co., INTECH Construction, B. Pietrini & Sons, Shoemaker Construction, and T.N. Ward Construction. Interviewees received the interview questions in advance, and interviews lasted 60 to 90 minutes. *See* Appendix 12. Representatives of seven owners were interviewed: Comcast Corporation, Drexel University, Liberty Property Trust, Philadelphia Capital Programs Office, Philadelphia Industrial Development Corporation, Temple University, and Westrum. Interviewees received the interview questions in advance, and interviews lasted 60 to 90 minutes. *See* Appendix 13.

Union apprentice coordinators routinely participate in recruitment activities in high schools such as “Career Day” events, but they find that high school students are

²⁵ Three unions declined to be interviewed: Carpenters, Electricians, and Operating Engineers, although the latter union provided testimony at the Commission’s public hearing in July 2008.

usually not interested in careers in the building trades. More generally, they find that many students in their middle and late teens are not motivated to think about any career. The coordinators reported that high school personnel such as guidance counselors and teachers are not interested in promoting apprenticeships in the building trades as a promising career path for those who do not want to attend college. Some speculated that this lack of interest is related to the metrics that are used to evaluate high schools because schools “get credit” for graduates who enter post-secondary education, but not for graduates who enter apprentice programs. Entering a registered apprentice program should clearly be viewed as a positive outcome for a high school graduate. Apprentices who become journeymen enjoy lifetime earnings that are comparable or more than comparable with many careers that involve formal post-secondary education.

All of the unions make efforts to spread the word regarding their application processes. Announcements are sent to schools and other organizations. Some unions accept applications continuously, while others have specific application periods. Since both high school students and school personnel lack interest in construction careers, it is not surprising that all of the union officials reported that very few people seek to enter apprentice programs immediately after high school. Rather, most applicants are in their mid-20s.

That fact is consistent with what researchers have learned about the economy-wide difficulties that many young people encounter in the transition from high school to the world of work. Individual histories of 18-24 year-olds often involve relatively frequent employment terminations (both voluntary and involuntary), spells of unemployment, movements from one industry to another, and movements in and out of post-secondary education. One of the reasons for this pattern is individuals’ trying out different jobs as they search for work they want to do. Another reason is what some might call immaturity and others might call the exuberance of youth. Whatever one calls it, we know that many people in their late teens and early 20s are not highly motivated to pursue long-run careers. At the same time, most of the “employers of choice” (those who offer good jobs with growth potential) avoid hiring people, other than those with bachelor’s degrees, until they reach their mid-twenties. These employers typically wait for the best people to build records of success and then hire them. That is, the employers

of choice use the volatile youth labor market as a filter to identify the most promising candidates in their mid-20s.

The fact that the people who are most likely to apply for building trades apprenticeships have been out of school for several years poses a significant challenge to unions that seek to increase minority membership. There are few opportunities to reach large numbers of potential applicants at reasonable cost. All of the unions distribute information regarding opportunities to apply for their apprentice programs, but none of the apprentice coordinators could identify regular sources of substantial numbers of applicants (white or minority) other than referrals from currently active or retired members. Almost all coordinators reported that many applicants have family or friends who are active or retired members of the union. (All of the officials reported that no preference or advantage was given to such applicants once they apply.) Similarly, some contractors and owners reported that their involvement in construction was a result of the influence of family members who were employed in the building trades. The downside of this pattern is that the family and friends of members are likely to be in the same racial and ethnic groups as the members. The potential future upside is that as more minorities come into the unions from any source, their family members and friends will begin to apply, thereby increasing the percentage of minority applicants, but this effect will take years to play out in significant numbers.

When asked about other sources of applicants many union officials mentioned the DAP program. Their comments on applicants from DAP were mixed. In some cases they successfully completed the application process and the apprentice program, but several officials complained that DAP applicants were not highly motivated and often failed to complete the application process. Several officials had negative comments about another summer program for high school students. It was suggested that many participants were motivated only by the program stipends they received and were not genuinely interested in careers in the building trades.

All of the unions reported that many people initiate but fail to complete the application process. To complete the application process, the applicant typically must complete a written or online application, submit a high school transcript, and in some cases provide one or more letters of recommendation. Two unions reported more than

1000 applicants per year; four unions reported 500 to 1000 applicants per year; and five unions reported fewer than 500 applicants per year.

In almost every case, an apprentice is required to have a high school diploma or a GED. Many applicants have taken some college courses; some have earned associate's degrees; and a very small number have earned bachelor's degrees. Apprentices are also required to have a valid driver's license.²⁶ Even with this requirement, transportation is often a problem for apprentices, particularly those in unions that have large geographic footprints, because apprentices, like members, are expected to work anywhere in the union's geographic jurisdiction.

Those who complete the application process are invited to take a written test, which varies across unions. Applicants who score above designated thresholds are invited to interviews. The scoring procedures and thresholds differ across unions. A few unions, interview minority applicants whose test scores are below the cut-off used for white applicants. In all cases, union officials participate in interviews. Some of the unions include contractor representatives in the interview panels. Two unions reported that 150 or more applicants pass the test and are interviewed each year; four unions reported 75 to 150 per year; and four unions reported fewer than 75 per year.

In most cases, applicants are ranked according to specified formulae that depend on test scores and performance in interviews, and applicants are admitted to the apprentice program in the order of the ranking, usually in groups, which are often called classes. The unions determine the number of new apprentices based on their assessment of the likely employment prospects. Several officials mentioned concerns that there be enough work for all of the apprentices. Two unions reported empanelling 80 or more apprentices per year; 2 unions reported 40 to 80 per year; and six unions reported fewer than 40 per year.

There is a notable exception to the above scenario. The Carpenters, the largest of the building trades unions, use a test and an interview to identify qualified candidates, but

²⁶ A New Jersey study of driver's license suspensions concluded that suspension creates an often overlooked barrier to the economic advancement of low income and low skilled workers, especially in the building and construction trades where a valid license is required. The study showed that 5 out of every 6 participants in a pre-apprentice program had suspended drivers licenses. The study recommended efforts to reinstate suspended licenses or offer licenses restricted to work and training activities. (Zimmerman and Fishman, 2001).

qualified applicants can enter the apprentice program only if a contractor (called a sponsor) commits to employ them for at least one year. Because the Carpenters union declined our request for an interview, we have not been able to determine why the Carpenters use this different system. We note that such a system does create an opportunity for contractors to influence the selection of apprentices.

All of the unions require new apprentices to pass a drug test. Failure is not very common, as might be expected with a test that is anticipated, but the use of the test is thought to discourage would-be applicants who use drugs.

Apprentice programs run for 3 to 5 years.²⁷ While in the programs, apprentices typically attend classes for approximately 150 to 200 hours per year, most without pay. The typical class schedule is one day every two weeks during most of the calendar year.

3. Alternative Paths

Helmets to Hardhats

This program sought to recruit union members from persons who had served in the military. Many unions reported that the few applicants referred to them by the “Helmets to Hardhats” program were strong candidates who were likely to succeed in the apprentice program. Those candidates almost never have sufficient skills to start as journeymen. Several unions also reported that veterans generally, even those who did not come through the “Helmets to Hardhats” program, were usually very good candidates for their apprentice programs. A few unions give small advantages to veterans in the application process. Several unions have told us that individuals referred to them by the Helmets to Hardhats Program are typically white males, so the program may not be a good vehicle for increasing the inclusion of minorities and women.

Challenge Testing

Many unions have procedures for admitting new members as advanced apprentices or journeymen based on what is often called Challenge Testing. Individual skills are evaluated, and those with some skills relevant to the trade are allowed to enter

²⁷ Two unions reported three-year programs, five unions reported four-year programs, and three unions reported five-year programs.

the union without starting as a first-year apprentice. In certain rare cases these individuals are allowed to start as second-year, third-year, or fourth-year apprentices, and in very rare cases as journeymen.

There is an open question as to whether the use of challenge testing could be expanded to pull non-union minority construction workers with journeyman level skills into unionized construction. In the short run, there would be a “zero-sum” element to this process in the sense that any increased minority inclusion in unionized construction would necessarily decrease minority inclusion in non-unionized construction, but the minority workers who were able to move from non-union work to union work would surely benefit.

4. The Role of Owners

The project owner can have a major influence in determining whether a construction project is inclusive of minority and women workers. Whether the owner’s financial investment in its construction project will be made on a nondiscriminatory basis and include and a diverse labor pool, is a question of the owner’s responsibility and commitment to diversity. The Commission wanted to learn more about the owners’ experiences and not simply from the vantage point of measuring their participation achievement on a given building project. To that end, the Commission developed an instrument which was used to conduct structured interviews of the following government and institutional owners and private sector owners, including commercial developers:

- City of Philadelphia Capital Program’s Office
- Philadelphia Industrial Development Corporation
- Comcast Corporation
- Drexel University
- Temple University
- Liberty Property Trust
- Westrum

The Commission also considered information elicited from the public hearings and other interactions with owners.

Without exception, all owners who were interviewed identified affirmative measures that are taken to address the representation of minority and women contractors and workers on the project. These measures result from the owner's adoption of corporate policies to ensure a level of diversity or, in the instance of government (or developers working for a government entity), the measures resulted from some form of government mandate.

All owners indicated the use of numeric goals in seeking minority and women contractor inclusion and to a lesser extent with respect to the construction workforce on the project. At least one owner considered the hiring of "Philadelphia residents" in addition to targeted minority and female hiring. Goals are imposed upon the contractor for implementation. In most instances, the contractor's compliance with the owner's numeric goals was voluntary. Owners expressed a higher level of confidence in achieving minority and women contractor goals than workforce goals. Workforce achievements were based primarily in owner sponsored apprenticeships.

The "Lucien E. Blackwell Apprenticeship Program at Penn" provides instruction in life skills and financial literacy, as well as classes in the trades and academic enrichment to train community-sponsored candidates in such trades as carpentry, electrical work, painting, cement and brick masonry and steam fitting. Trainees may also choose to learn to be laborers, finishers, plumbers, sheet metal workers, elevator mechanics or iron workers. Participants in the program enter and complete the pre-apprenticeship training each year. Candidates who successfully pass the appropriate union-apprenticeship test are referred to contractors for placement on university construction sites by the Greater Philadelphia Urban Affairs Coalition.

The Philadelphia Housing Authority (PHA) provides pre-apprentice training for its residents in trades associated with residential construction. The PHA trainees are paid a nominal stipend and are employed for 16 weeks on PHA housing projects where they where they learn basic skills. A limited number of participants successfully test to move into union apprenticeships, but all gain valuable experience and training that may lead to employment opportunities.

5. Employment of Apprentices and Journeymen

Allocation of Work

Becoming a union member as an apprentice or journeyman is just the first step in inclusion. The next, and very important, step is getting the work. Apprentices also work for contractors while they are in the apprentice program and the unions seek to place them full-time (except for class time). Typically, a new apprentice earns about 50% of the journeyman wage and that percentage increases up to 90% for the most senior apprentices. In many cases, apprentices receive limited benefits during a probationary period of 6 months. Most notably, new apprentices typically do not receive health insurance benefits, so applicants who currently have health insurance benefits in a non-union job have to risk a period of no coverage if they are going to enter an apprentice program.

Most contracts specify a maximum ratio of apprentices to journeymen (e.g., 1 to 4) on a job. Some unions reported reluctance of some contractors to employ apprentices at all, particularly new ones, because of concerns about their productivity. Most of the unions assign particular apprentices to particular jobs, but a few unions allow the apprentices to solicit their own work if they can. In all cases, contractors are able to reject particular apprentices which can have the same effect as solicitation. That is, when contractors reject particular apprentices, it is in effect a sort of “negative solicitation” process. Whether a contractor is picking the apprentices he wants or rejecting ones he does not want, he is clearly playing a major role in the selection process.

6. Greater Philadelphia Urban Affairs Coalition Study of Construction

From 2005 to 2007, the Economic Development Projects Unit (EDP) of the Greater Philadelphia Urban Affairs Coalition was contracted to monitor workforce inclusion on 150 different construction sites in Philadelphia. While the great majority of these projects (76%) were publicly funded, a significant percentage were private (19%) or joint public/private (5%) ventures. Most (79%) were renovation projects; new construction represented 21% and demolition less than 1% of these projects. The average length of these construction projects was 468 days (or just under 16 months); however, the length of projects varied greatly (from 152 days to 1,521 days). Most of these

projects (83%) began during the period of study, between January 1, 2005 and December 31, 2007, and did not end until after the period of study (post-December 31, 2007). Sixteen projects began before and ended during the period of study, and 10 projects both began and were completed during the three-year period.

In total, 13,416 individuals were employed at EDP-monitored construction sites in Philadelphia from 2005 to 2007. Twenty percent of these workers were minority.²⁸ Only 1% of all employees were female. Three-quarters (74%) of construction workers lived within the Commonwealth of Pennsylvania. Most of the remainder resided in adjacent states (NJ, DE, and MD). Less than 1% of these workers lived in states that placed them clearly outside the Philadelphia commuting area (21 different states were represented among these workers).

Only one-third (34%) of all workers on Philadelphia construction sites were Philadelphia residents. However, minority workers were more than two and half times as likely to reside within the city limits as non-minority workers. While only one in four (25%) non-minority construction workers lived within the city limits, nearly two-thirds (66%) of minority workers were Philadelphia residents.

Minority and non-minority workers, alike, most commonly worked as Laborers, Carpenters, and Electricians. However, minority employees were much more likely to be employed as Laborers. Nearly half (49%) of all minority workers were Laborers compared to just 11% of non-minority workers. Non-minority workers, in contrast, were much more evenly distributed across the trades, and were nearly twice as likely as minority workers to be Carpenters (19% non-minority vs. 10% minority) and Electricians (12% non-minority vs. 6% minority).

The majority (78%) of all workers, minority and non-minority, were Journeymen or Mechanics (based on their last job). However, minority workers were slightly more likely (85% of minority workers) to be at the Journeymen/Mechanic trade level than non-minority workers (76% of non-minority workers) and were only about one-third as likely to be Foremen (4% of minorities vs. 11% of non-minorities).

²⁸ For comparison, minorities represented roughly 58% of working-age (18-64 years) Philadelphia residents and 30% of working-age residents regionally (Phila. SMSA), according to 2008 U.S. Census projections.

The number of workers, both minority and non-minority, on EDP-monitored construction projects increased between 2005 and 2007. However, non-minority workers saw greater increases than minority workers (11% per quarter vs. 7% per quarter, on average). Therefore, while there were more minority workers in 2007 than in previous years, they represented a slightly smaller portion of the overall workforce. Examination of minority workforce participation trends within 13 specific trades did not reveal any consistent departures from the overall trend.

The number of women working on EDP-monitored construction projects increased, on average, by 22% per quarter between 2005 and 2007. However, women at no time during the three-year period exceeded 2% of the overall construction workforce.

Corresponding to increases in the construction workforce from 2005 to 2007, the total number of hours logged by construction trade workers also increased across the period. The total number of hours logged, by subgroup, is largely a reflection of the actual number of workers in each subgroup. Since the non-minority workforce increased at a faster pace than the minority workforce across the three years, non-minorities also saw proportionately greater increases in their cumulative hours.

Examining the average hours logged per worker—rather than the cumulative number of hours for all workers—reveals results that are quite different. The typical minority worker across the three-year period worked, on average, 10 more hours per quarter than his/her non-minority counterpart. Both minorities and non-minorities saw increases in hours across the period (0.6% per quarter vs. 1.5%, respectively). However, quarter-to-quarter fluctuations in hours worked were substantial for both groups.

While trends in hourly wages increased across the three-year period for both minority and non-minority workers, minority workers continued to lag behind their non-minority counterparts. When examined across all construction trades combined, minorities earned substantially less per hour, on average, than non-minority workers: \$1.88 less per hour for Apprentices, \$6.17 less per hour for Journeymen, and \$6.41 less per hour for Foremen. Since hourly wages are uniform and strictly regulated within each trade and trade level, hourly wage differences between minority and non-minority workers must be related to factors other than pay-based discrimination.

Two different possible explanations for these wage differences were investigated: (1) differences between minorities and non-minorities in access to non-regular hours, which yield significantly higher hourly rates of pay (e.g., overtime, double time, premium time, vacation time, and holiday time); and/or (2) differing minority percentages across trades with differing pay-scales.

Across all trades combined, there were no significant differences between minority and non minority workers in their access to non-regular hours. While there were some non-regular hour differences between minority and non-minority workers within specific trades and levels, these differences were generally small, and importantly, did not consistently favor one group over the other.

The observed wage differences were primarily related to occupational differences in pay scales. Minorities were highly concentrated in the Laborer trade. Laborers at all levels earned lower hourly wages than did workers in most other trades, such as Electricians and Carpenters. Minorities were four times more likely to work as Laborers and only half as likely to work as Carpenters or Electricians. Thus, the concentration of minorities in the lower-paying Laborer trade coupled with their under-representation in higher paying trades appears to explain most, if not all, of the wage disparities found between minorities and non-minorities working at the same trade levels.

The EDP study shows that minority inclusion within the construction trades continues to represent a significant challenge in the City of Philadelphia. Minorities are underrepresented in the construction trades generally, whether viewed in comparison to their respective numbers in the population of Philadelphia or in the surrounding region. While minority construction workers log hours and earn wages that are comparable to their non-minority counterparts who are employed within the same trades and levels, minorities are highly concentrated within the Laborer trade, in which workers of all backgrounds earn lower wages, and are substantially less likely than non-minorities to be employed within the higher-wage skilled occupational groups. Finally, within trades, minorities are more likely than non-minorities to be working in lower paid trades, another source of wage disparities. The exact causes and contributors to these patterns of sorting warrant further study.

E. Recommendations, Goals and Strategies for Inclusion

1. Philadelphia City Government

Because this Commission was created by the Mayor of the City of Philadelphia, we begin our discussion of recommendations by addressing actions that should be taken by the government of the City of Philadelphia. The “City” refers to the Mayor, City Council, and all City government departments as well as agencies, boards and commissions. The City should play several roles in enhancing inclusion: *oversight, ownership of construction projects* and *leadership*. The Commission applauds the important public commitment of the Mayor to diversity and inclusion and his restructuring of the City’s approach to increasing inclusion. The Commission recognizes, however, that there is more important work to be done and that making and sustaining progress will require constant and vigilant review by the Mayor and City Council. It is extremely important that the City oversee the participation of minority and women workers not just in its own projects, but in all construction projects across the City and the region. Finally, the Commission wants to emphasize that City will have to devote significant budgetary resources to the quest for increased inclusion.

Recommendations: City Oversight and Data Collection

(1) The City should assemble data on the participation of minority and women construction workers in the regional construction industry.

(2) The City should set goals for minority and female membership in the building trades workforce in the Philadelphia region. Among men, a long run goal of 32% minority membership is strongly recommended. An initial goal of 7% for the participation of women is also strongly recommended, but, once it is reached, that goal should likely be raised.

The long run goal percentage of minority males is derived from our analysis of availability. The goal percentage for women is based on the 6.9% goal established by the U.S. Department of Labor. The Commission recognizes that this goal for female participation will not be achieved quickly, but we also believe that 7% may be too low

for the long run goal for participation.²⁹ The 7% goal will take time to reach, but once it is, the Commission believes that a higher revised goal should be considered.

These goals will not be reached overnight but can be reached over a period of years. The Commission has found it very difficult to specify a particular date by which they should be reached.³⁰ Although different trades have different levels of inclusion today and will have differing opportunities to increase those levels in the future, all should be expected to make steady progress toward the long run goal. That is each trade should achieve an increase in its rates of inclusion every year. If a steady increase in rates of inclusion (i.e., several percentage points) is not seen over a period of several years, that trade's progress should be a source of concern.

If more data become available, it may be possible to develop reasonable intermediate goals for inclusion. To do so, one would need data on the current age and demographic distribution of apprentices and journeymen and at least 10-year projections of the sizes of apprenticeship classes, numbers of expected retirements, and numbers of journeymen who might come in through non-apprentice paths such as organizing and challenge testing. The Commission recommends that the necessary data be assembled and intermediate benchmarks be developed because it believes that specific intermediate goals could spur action and produce results.

(3) The City should measure annual progress toward the membership goals.

(4) The City Office of Economic Opportunity should prepare quarterly reviews of inclusion data for presentation to the Mayor's Economic Opportunity Cabinet and an annual "Inclusion Report Card" for publication. Both types of reports should include measures of changes in participation of minorities and women.

(5) The City should develop a multi-trade workforce database and clearinghouse of local minority and women tradespersons currently unemployed and seeking work.

²⁹ Due to the difficulties in gauging interest in this nontraditional employment and assessing physical strength requirements for some trades, the Commission is not able to specify a higher goal for women at this time.

³⁰ One example of the difficulty is that at the time of publication of this Report, nine unions are reporting cancellation of their 2009 apprenticeship testing because of the economic recession's impact on the construction industry. Since apprenticeship is a recognized pathway to membership, these cancellations will undoubtedly have impacts on progress toward inclusion.

This recommended clearinghouse is not intended to replace or diminish the important role of the union locals in placing their members. Rather, the idea is to create a second mechanism with which contractors can identify unemployed male minorities and women that they can then request from the appropriate local. The Commission recommends that the new Office of Economic Opportunity be responsible for collecting and disseminating all data on the inclusion of minority and women workers.

Recommendations: The City as Project Owner

The City of Philadelphia is the owner of many construction projects, so it has the ability to establish inclusion goals, monitor the pursuit of those goals, and require compliance. Before it can take full advantage of its ownership position the City needs a complete understanding of inclusion in its recent projects.

(6) The City should conduct a baseline analysis of the current participation of male minorities, women, and Philadelphia residents in its recent construction projects.

(7) The City should establish goals and contractual requirements for workforce diversity in City construction projects.

As we note in the next section, the City should seek the engagement of large anchor institutions (universities and hospitals) to establish similar goals. Goals should be set based upon accessible availability and utilization data and other reasonable measures. While recognizing the legal constraints of narrow tailoring when establishing any race conscious remedies, goals should be "stretch" goals (achievable with best efforts), based on availability of journeymen and apprentices, specific to each union. Consequences of noncompliance (i.e., failing to use best efforts) should be clearly articulated to contractors and enforced. Incentives should also be designed to encourage goal achievement.

The Commission believes that the City's Office of Economic Opportunity (OEO) should be the entity responsible for developing project goals for workforce inclusion in City funded construction. OEO, partnering with the City's Labor Standards Unit, should monitor achievement of goals, have authority to take appropriate enforcement action for noncompliance and administer a quarterly and annual report. The report(s) will account

for the participation of minority, women and residents of Philadelphia as a percentage of all craft-workers participating in City-funded construction and should be furnished to the Mayor's Economic Opportunity Cabinet and City Council.

(8) The City should collect certified payroll data on City projects showing demographic distributions of hours worked and use them to monitor all City construction projects and enforce contractual requirements goal.

(9) Create a Compliance Ombudsman for redress of complaints regarding City-funded construction projects. A key function may include interviewing persons denied entry to union programs and jobs.

Recommendations: City Leadership

(10) The City should develop and consistently communicate the message that goals of inclusion and equal opportunity should be standard for the construction industry in Philadelphia in both public and private sectors.

(11) The City should identify decision makers at every tier of the construction industry and educate them of this policy.

The Commission believes that there should be an ongoing collaborative and meaningful dialogue including local construction users and owners, contractors, unions, educational institutions, social service intermediaries and other interested parties on construction industry workforce demographics and development. The results of that dialogue should help the City develop a practical, results-oriented and performance based implementation of this Commission's recommendations and of initiatives that emerge from continued collaborative effort.

(12) The City should establish an ongoing Advisory Commission on Construction Industry Diversity including union leaders, large and small contractors, contractor associations, public and private project owners, and community leaders

2. Unions and Contractors

In conducting its study of the construction workforce, the Commission has been hampered by limited data on minority and women participation in the building trades industry. Aside from union membership numbers provided by most of the building trades

to City Council in December 2007, few reliable quantitative measures currently exist that could inform our deliberations, particularly on the issue of the extent of employment of the minorities and women who are currently members of the unions. While we have attempted to improvise the needed information, one of our strongest recommendations going forward is the better development and collection of data on minority and female membership and employment, especially by using pension fund data to determine employment rates.

Recommendations: Unions

(13) The unions should collect and tabulate demographic data on membership and employment.

In order to accurately assess minority and female representation in the building trades unions and to increase public confidence in these data, each union should assemble data on members including each member's race, ethnicity and gender. The membership database should include the aggregate number of hours worked by each member.

(14) The unions should set membership goals. Among men, a goal of 32% minority membership is strongly recommended. An initial goal of 7% for the participation of women is also strongly recommended, but, once it is reached, that goal should likely be raised.

As noted above, the goal percentage of minority males is derived from our analysis of availability. The goal percentage for women is based on the 6.9% goal established by the U.S. Department of Labor. The Commission recognizes that this goal for female participation will not be achieved quickly, but we also believe that 7% may be too low for the long run goal for participation.³¹ The 7% goal will take time to reach, but once it is, the Commission believes that a higher revised goal should be considered.

As also noted above, the Commission has found it very difficult to specify a particular date by which the goal should be reached. Different trades have different levels of inclusion today and will have differing opportunities to increase those levels in

³¹ Due to the difficulties in gauging interest in this nontraditional employment and assessing physical strength requirements for some trades, the Commission is not able to specify a higher goal for women at this time.

the future, but all should be expected to make steady progress toward the long run goal. That is each trade should achieve an increase in its rates of inclusion every year. If a steady increase in rates of inclusion (i.e., several percentage points) is not seen over a period of several years, that trade's progress should be a source of concern.

The speed with which membership goals can be reached will also depend on how those goals are pursued. It is important to recognize that increasing minority and female membership only through 32% participation in apprentice programs will be a slow process because each apprentice class represents a small percentage of total membership in any union. Even with the larger apprentice classes that will be required to replace retiring baby boomers, the demographic impacts of apprentice classes will be relatively small.

(15) The unions should use the apprenticeship programs to address the under representation of women and minorities.

Although apprentices typically constitute a small percentage of the membership of the unions, apprenticeship is the most straightforward path to union membership. To address minority and women under representation in the unions, union apprenticeship programs should over represent minorities and women to correct this imbalance over time. It is recommended that until the membership goal is met, minorities should constitute at least 50% of all apprenticeship classes and the unions should undertake focused outreach for female apprentices. It should be noted that, in the Local 542 litigation, which was discussed above, the Judge ordered the union to empanel apprentice classes that were 100% minority.

(16) The unions should aggressively seek other ways of adding minorities and women to union membership.

This should include recruitment of qualified trades people who are not currently working through unions. Special efforts should be made to recruit returning servicepersons with construction trade skills (e.g., "Helmets to Hardhats" Program) and to engage the interest of public school students for building trades careers. Several unions have warned us that individuals referred to them by the Helmets to Hardhats

Program are typically white males, and therefore not a good source of minorities or women.

(17) The unions should actively recruit minorities and women for apprentice and journeymen positions.

The unions should plan outreach to non-traditional sources of members (e.g., public schools, faith-based institutions, prison re-entry programs) and become partners with the City of Philadelphia in its efforts to cultivate a diverse pool of union labor. One of the major difficulties of any sort of outreach program is that most applicants for apprentice programs are in their mid-twenties and, therefore out of school. It is difficult to reach this age group, whether they be minority or not.

(18) The unions should work with community groups and others to reach out to young adults who are prepared to enter apprentice programs.

(19) The unions should explore the use of expanded, focused challenge testing to accelerate the pace with which minorities and women become union journeymen.

(20) The unions should create mentorship programs to help minorities and women succeed as apprentices and journeymen.

Membership in the building trades requires entrepreneurial skills for success. Newly recruited minority and women members should be mentored to learn how to develop these entrepreneurial skills, maximize their work opportunities and survive seasonal and economic downturns in work.

(21) Each union should appoint within its ranks, an individual whose primary responsibility is to ensure the success of the union's efforts to improve membership and employment for minorities and women.

(22) Each union should provide a forum for minorities and women to raise issues with union leadership.

Recommendations: Contractors

(23) Contractors should encourage and support union efforts to use the apprenticeship programs, “Helmets to Hardhats” programs, Challenge Testing, and other initiatives to address the under representation of minorities and women.

One very promising path to successful career employment in the building trades is to hook on as a “permanent” member of a contractor’s workforce, instead of having a series of short-term jobs. Contractors should be conscious of grooming female and minority workers for long-term employment, especially as older workers head toward retirement.

(24) Contractors should add minorities and women to their “steady” workforces.

(25) Contractors should make it clear to their managers and foremen that employing a diverse workforce is a worksite objective. Incentives should be offered for achievement of increased inclusion of minorities and women.

(26) Contractors should encourage the Chamber of Commerce and other trade associations to emphasize the importance of inclusion and to play a key role in establishing and communicating goals for inclusion of minorities and women in private-sector projects.

(27) Contractors should ensure supportive work environments for minorities and women by accommodating special needs.

(28) Contractors and unions should work together to ensure that current work is allocated to minority and women apprentices and journeymen in proportion to their current shares of union membership; as those shares of membership increase over time, contractors and unions should ensure that the corresponding shares of available work increase at the same rate.

3. Construction Project Owners

The Commission believes that too much of the public discussions of inclusion and diversity have focused on the building trade unions and not enough on other equally important players in the industry – the contractors and the project owners. Contractors provide the employment that is the ultimate goal of this initiative. In some trades, contractors control new hires through solicitation or sponsorship (as opposed to hiring hall referrals by the union). Even in those trades where initial placements are made through strong centralized hiring halls, contractors control whether and when the worker

is laid off or fired. Contractors clearly select their own “steady workforces” that provide the full-time employment opportunities that are so valued in this industry. They too must be held accountable when they are inadequately inclusive.

Project owners also have an important role in this discussion. Simply put, they are the “customer” which the contractors and the unions try to satisfy. If project owners demand good data and require significant minority and female work participation in their projects, it will happen. Surely public entities (such as the City of Philadelphia, the School District of Philadelphia and SEPTA) and large non-profit organizations that are economic drivers in the region (such as the universities and health care organizations) can exert major influence toward the enhanced inclusion of minorities and women in the Philadelphia building trades. Many of the larger project owners are already emphasizing inclusion in some of the ways we are suggesting in the following subsections, but the Commission believes their enlightened approaches should be pursued by others, in fact all others. All owners should exercise their power to make workforce diversity a reality by insisting that minority and women workers are used to the maximum extent possible on their projects. Owners may consider adopting project goals similar to the City of Philadelphia. The expectation of a diverse workforce should be communicated to the contractors and subcontractors at all tiers, as well as the unions.

(29) Owners should insist on a diverse workforce and require accountability from contractors and unions

(30) Owners should require that the workforces on their projects are representative of the community.

(31) Owners should insist that the trades unions provide availability and utilization data.

(32) Owners should insist that contractors provide demographic information about their staff workers, especially their “steady workforce” and documentation of their efforts to increase inclusion of minorities and women workers in all of their projects.

(33) Project owners should recognize that minority or women workers might be more readily available in one trade than another at a given time and focus recruitment expectations on those trades.

(34) Contracts between owners and contractors should include goals for minority and women participation and provide for contractual enforcement.

4. Educators and Trainers

(35) A Council of Training Programs, reporting to the Office of Economic Opportunity, should be established to set goals and track progress of increasing the pipeline of minorities and women to apprenticeship programs.

(36) A directory of existing training programs should be developed and marketed appropriately including publication on the City of Philadelphia's website and use of public access television and radio programming.

(37) Educators should ensure an adequate number of high quality training programs for youth and young adults, developed in partnership with the unions.

(38) Reintegrate vocational-tech options into the middle school and high school system, rather than as stand-alone schools, as a collaboration of the City, School District and City workforce development institutions.

(39) Educators should help recruit good candidates for building trade membership. Appropriate candidates should be strongly encouraged to consider entering building trades apprentice programs after graduating from high school.

(40) Educators should set goals for minority and women participation in and graduation from School District training programs, subject to quarterly review by the Council on Training Programs.

5. The Community as a Whole

(41) The Philadelphia Chamber of Commerce and other business organizations should communicate their support of initiatives to increase the inclusion of minorities and women in the building trades.

(42) Neighborhood and community organizations can be eyes and ears for the City. They should observe construction employment in their areas and report concerns as they arise.

(43) Neighborhood and community organizations should also be disseminators of career information and advocates for inclusion.

(44) Parents and other family members should help children and young adults develop the values and attitudes, and behaviors that will allow them to be successful in their work.

IV. CONTRACTING IN THE CONSTRUCTION INDUSTRY

The Commission examined the availability and utilization of minority and women owned businesses in the construction industry with the goal of identifying those challenges and barriers that restrict contracting opportunities. Several members own companies and are well aware of the issues described in this report.

The Commission analyzed variances in the development and inclusion of minority and women owned contractors in the Philadelphia construction industry. This report makes specific recommendations for the elimination of such variances to ensure the growth and effectiveness of these companies. In the process, the Commission's goal is to facilitate the cost effectiveness, growth and expansion of the local construction industry as a whole.

To further inform its deliberations, the Commission has reviewed existing disparity studies, conducted interviews of government officials, business owners and other stakeholders. The Commission designed and distributed a questionnaire which explored the impact of financing and bonding for minority and women owned construction companies. The seventy two survey respondents include white male owned, women, African-American, Hispanic and Asian owned contractors. The City Office of Economic Opportunity (formerly the Minority Business Enterprise Council) certifies minority-owned, woman-owned, and disabled-owned firms and maintains a database of certified companies in many industries including the construction industry. The Certification Unit has the responsibility of certifying and re-certifying minority, women, and disabled owned business enterprises.

The certifications are made pursuant to the Mayor's Executive Order 02-05, and various federal guidelines thereby making them eligible to participate in and bid on City contracts. Minority and women certification require that at least 51% of the interest in the entity is beneficially owned and controlled by minority persons (or women). Eligible minorities are Black or African-American, American Indian or Alaska Native, Asian, and Hispanic. Under the federal Disadvantaged Business Enterprise certification program, the business owner's personal wealth may not exceed \$ 750,000.

There are federal, state and local government entities that utilize similar classifications. The various certifications are also used in the private sector to define self-

imposed company goals. Certification is based on the primary product NAIC code (e.g., construction is 26), but firms can list other products and services based on their capabilities.

The City's Office of Office of Economic Opportunity offers an expedited certification process for firms that are currently certified by another governmental agency. A copy of such certification is to be submitted with the completed OEO application.

A. Availability and Utilization of Minority and Women Owned Businesses

As in the case of participation of workers, the Commission has found that the participation of minority, women and disabled persons in the construction workforce is best understood in terms of their availability and utilization.

Contractors are typically characterized as being available for work in the construction industry if they are *interested* in and *prepared* to conduct construction projects or portions thereof. Availability of *contractors* in a particular race, ethnicity, or gender group in a particular market area is defined as *the proportion of all interested and prepared contractors in that area who belong to that specific group*. For example if there were currently 1000 contractors who were interested in and prepared for projects in a particular specialty in a particular geographic area, and 300 of them were African-American, then the current availability of African-American contractors of that specialty in that area would be 30%.

In the contracting context, utilization refers to the awarding or completion of projects to available contractors. Utilization of a race, ethnic, or gender group of contractors can be defined in many different ways, several of which are discussed below. The utilization of available male minority, women, and disabled contractors depends on owner policies and practices regarding selection of contractors and subcontractors as well as contractor policies and practices regarding selection of subcontractors.

As in the case of workers, one can derive valuable insights from comparisons of utilization of contractors with availability. Whenever the utilization of a particular group of contractors is significantly lower than its availability, there is a concern that current racial, ethnic, or gender discrimination may be the explanation. For example, if the

availability of minority contractors in a particular specialty is 30%, but the utilization is 15%, it becomes important to explore the causes of such discrepancies. As in the case of workforce discrepancies, there are several possible explanations: there could be methodological problems with the measures of utilization and/or availability,³² or the differences may have occurred by chance,³³ or intentional and unintentional discrimination by contractors or owners. In any event, any unexplained shortfall of utilization relative to availability should raise concerns and inspire efforts to raise utilization.

In conducting its study of the minority and women and contractors in the construction industry, the Commission has been hampered by limited data on participation. Although we have attempted to fill this void with available studies and anecdotal information, one of our strongest recommendations going forward is the systematic development and collection of data on male minority, women, and disabled contractors.

1. Measuring Availability and Utilization

Availability of contractors should be defined specifically with regard to *time frame, geography, type of work, and capacity*.

Time Frame

With regard to time frame, it is helpful to consider short-term, medium term, and long-term measures of availability:

- Short-term availability measures should reflect the numbers and current capacities of male minority, female, and disabled contractors who are currently *interested in and prepared* to conduct projects in the construction industry.
- Medium-term availability measures should reflect the potential ability of existing male minority, female, and disabled contractors to increase their capacities over time.

³² We discuss measurement of availability and utilization below.

³³ There are well established statistical methods that can tell us whether a discrepancy between utilization and availability is so large that it would be extremely unlikely to have occurred by chance.

- Long-term availability should reflect the minorities, women, and disabled persons who would be *interested* in becoming construction contractors if there were no barriers to their participation.

Geography

The geographic dimensions of availability could be defined in terms of where contracting firms conduct projects where the firms are located. We would prefer to focus on where contractors conduct projects so as to define the geography of the construction contracting market, that area within which contractors compete for and conduct construction projects. Unfortunately, some of the relevant data are reported only on the basis of firm location.

We have considered different groupings of firm locations. One attractive choice is the 12-County Philadelphia-Camden-Vineland Combined Statistical Area (PCSA).³⁴ The 11-County Philadelphia Metropolitan Statistical Area (PMSA) might be more attractive were it not the case that more detailed data are available for the PCSA.

Another potentially useful choice of geographic location is the City of Philadelphia. The City is arguably too small an area on which to focus because contractors from outside of the City routinely conduct projects in the City and contractors located in the City conduct projects outside of the City. A City level analysis may be of interest, however, because some of the best data on utilization of minority and female contractors are available only for City construction projects.

Type of Work

Contractors are differentiated by the types of work they do. According to the U.S. Bureau of Labor Statistics:

The construction industry is divided into three major segments. The *construction of building* segment includes contractors, usually called general contractors, who build residential, industrial, commercial, and other buildings. *Heavy and civil engineering construction contractors* build sewers, roads, highways, bridges, tunnels, and other

³⁴ The Philadelphia-Camden-Vineland Combined Statistical Area (PCSA) is the Philadelphia Metropolitan Statistical Area (PMSA) plus Cumberland County in New Jersey. The 12 counties are Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, Cumberland, Gloucester, and Salem Counties in New Jersey; New Castle County in Delaware; and Cecil County in Maryland.

projects. *Specialty trade contractors* perform specialized activities related to construction such as carpentry, painting, plumbing, and electrical work. (U.S. Bureau of Labor Statistics 2008)

Capacity

Different contractors focus on different size projects – some by choice and some because of credit, bonding, or other types of limits on their capacities. Simple percentages based on counts of minority and non-minority or of female and male contractors are likely to be misleading because, on average, minority contractors and women contractors are likely to have more limited capacities than their non-minority and male counterparts. There are at least two ways to ascertain the capacity of a contractor:

- One way to define capacity is in terms of maximum project size, i.e., what is the largest project (in terms of dollar value, number of workers, or payroll) that a contractor could manage. This definition is conceptually appealing for some purposes, but it is subjective and, therefore, difficult to measure.
- Another way to define capacity is in terms of the dollar value of projects conducted, number of workers employed, or payroll paid over some time interval, such as a year. The actual levels of these concepts can be measured straightforwardly, but the potential levels, what we usually think of as capacity, are much more difficult to measure.

2. *Measuring Short-Term Availability of Contractors*

Measures of short-term availability of contractors should reflect the minorities and women who are currently *interested in and prepared* to conduct projects in the construction industry. There are two sources of data on short-term availability of minority and women contractors: the U.S. Census Bureau and public agency and private organization lists.

Data from the U.S. Census Bureau's Survey of Business Owners

Every 5 years, the U.S. Census Bureau conducts the Survey of Business Owners, which collects information on the number, revenue, number of employees, and annual payroll of minority-owned and female-owned businesses. The most recent data that are

currently available come from the 2002 survey. It would be desirable to have more recent information, but the data from the 2007 survey will not be available until mid-2010.

Interestingly, the Census Bureau reports the existence of 45,825 construction firms, overall, in the 12-county Philadelphia-Camden-Vineland Combined Statistical Area (PCSA). That number included 1,320 African-American firms, 1,429 Hispanic-owned firms and 3,315 construction firms owned by white females. Comparable data were not made available for Asian, Native American or firms owned by disabled persons. See Appendix 14 which shows simple counts of contractor firms in demographic groups and annual revenue, which is a measure of the capacity of those firms, for all firms.

It is a fact that about 9 out of every 10 black or Hispanic firms in the construction industry have no employees, and that two out of every three female-owned firms also have no employees. The revenues for such firms on an annual basis are very low:

- For black-owned construction firms without employees, the average annual gross receipts are \$29,842.
- For Hispanic-owned construction firms without employees, the average annual gross receipts are \$56,818.
- For female-owned construction firms without employees, the average annual gross receipts are \$35,521.

The data for firms with paid employees³⁵ are also found in the lower tableau of Appendix 14 which shows simple counts of contractor firms in demographic groups and three measures of the capacity of those firms - annual revenue, number of employees, and annual payroll. It would be reasonable to assume that the firms that are most "ready" and "able" to bid successfully on municipal and private construction projects would be those "with employees." According to the U.S. Census data, notwithstanding the total number of minority construction firms (3,385) and female construction firms (3,515) in the Philadelphia region, only 12.9 percent of minority firms actually have "paid employees." Surprisingly, 31.8 percent of female-owned construction firms in the City (1,118)

³⁵ Firms without employees are primarily individual independent contractors.

actually have "paid employees," a percentage very close to, and higher than, the 9.6 percent of all local construction firms with paid employees.

According to the 2002 Economic Census, the 16,385 construction firms statewide with 1-4 employees generated, on average, \$292,950 annually. Those with 5–9 employees generated, on average, \$787,965. Those with 10 – 19 employees generated, on average, about \$1.78 million in annual revenues. By comparison, among minority and female construction firms included in the Census Bureau's report, there were 174 African-American companies with employees in the Philadelphia-Camden-Vineland metro area, with collective gross receipts of \$140.9 million and a total payroll of \$61.1 million. In fact, if all of the African-American firms in the Philadelphia metro area were combined to form one company, that business would rank just eighth on the Business Journal's list of the Top 25 regional construction companies, behind Shoemaker Construction (75 local employees, \$145 million in local billings, in 2006).

The Commission has obtained an unpublished special tabulation of the same 2002 data for Philadelphia County alone.³⁶ See Appendix 15. According to the 2002 Economic Census:

- Average annual receipts for all firms in the Philadelphia construction industry are about \$616,723.
- Average annual receipts for Minority firms in the Philadelphia construction industry are about \$144,262.
- Average annual receipts for white female-owned firms in the Philadelphia construction industry are about \$421,877.
- Average annual receipts for black-owned firms in the Philadelphia construction industry are about \$132,672.
- Average annual receipts for Hispanic-owned firms in the Philadelphia construction industry are about \$129,396.
- Average annual receipts for Native American-owned firms in the Philadelphia construction industry are about \$111,034.

³⁶ The Commission wishes to thank the Greater Philadelphia Chamber of Commerce for funding the acquisition of these data.

Data from Various Lists of Minority and Women Contractors

There are several lists of minority and women construction contractors that have been assembled by various public agencies, by private organizations, and by the Commission's Contracting Committee:

- List of minority and female contractors certified by the City's Minority Business Enterprise Council, which is now the Office of Economic Opportunity (OEO), as of Spring 2008;
- List of Pre-Qualification Prime Construction Contractors from the School District of Philadelphia dated December 17, 2008;³⁷
- List of minority and female contractors certified by the Pennsylvania Unified Certification Program (PUCP), which includes PennDOT, the Southeastern Pennsylvania Transportation Authority, the Delaware River Port Authority, and the Pennsylvania Turnpike Commission;³⁸
- List of minority and female contractors from New Jersey BizNet UCP Directory, which includes NJDOT, New Jersey Transit, and the Port Authority of New York and New Jersey;³⁹
- List of minority and female contractors from New Jersey Schools Development Authority;⁴⁰
- List of minority and female contractors from Delaware Office of Minority and Women Business Enterprise;⁴¹
- List of minority and female contractors from Maryland Minority and Women Business Enterprise;⁴²
- Minority and female contractors who responded to the Contractor Survey conducted by the Commission's Contracting Committee;
- List of minority and female contractors provided by the Technical Assistance Center for Emerging Contractors (TAC); and

³⁷ <http://www.phila.k12.pa.us/offices/psit/prequal/prime.pdf>

³⁸ Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties only (<http://www.paucp.com>)

³⁹ Burlington, Camden, Gloucester, and Salem Counties only (<http://www.njucp.net>)

⁴⁰ Burlington, Camden, Gloucester, and Salem Counties only
(http://www.njsda.gov/Business/Prequalification/Directory_search.asp)

⁴¹ New Castle County only (<http://omwbe.delaware.gov/certdir.asp>)

⁴² Cecil County only (<http://mbe.mdod.state.md.us/cgi-bin/mbedir/mbedirectory>)

- List of minority contractors provided by the National Association of Minority Contractors.

We have combined these 10 groups and eliminated any duplicates that we could identify.⁴³ We included the lists from OEO and the School District of Philadelphia in their entirety. We included contractors from the other 8 lists only if they were located in the 11-County Philadelphia Metropolitan Statistical Area. The merged list contains a total of 389 minority-owned and female-owned construction firms. The merged list contains 113 contractors that do not appear on the OEO list, so it appears that the OEO list is not a complete list of minority and female construction contractors that are available in the Philadelphia Metropolitan Statistical Area. Unfortunately, we do not have a comparable count of all firms (those owned by men or women of any race) in the area, so we cannot measure the availability of minority and women firms on a percentage basis.⁴⁴ Nevertheless, the counts are informative. *See* Appendices 16 and 17 for the demographic breakdown of the owners of those firms and the types of work that they perform. *See* Appendix 18 for the complete list of contractors.

3. Measuring Medium Term Availability of Contractors

Measures of medium-term availability of contractors should reflect the potential ability of existing minority and female contractors to increase their capacities over time. While we have no good measures of medium-term availability of contractors, we do know that existing firms face barriers that limit their current capacities.

Data from the Contractor Committee's survey reveal the following comparisons of minority and non-minority contractors:

- 24% of minority contractors and 19% of non-minority contractors do not have credit in the form of lines of credit, equipment loans, or term loans;

⁴³ Another potential source of minority and female construction contractors is the list on the Central Contractor Registration webpage of the U.S. Small Business Administration (<http://www.ccr.gov>). The webpage does not lend itself to downloading information on multiple contractors, so we have not included information from this source at this time. It would be possible for the Philadelphia Office of Economic Opportunity to make a special request to obtain the information in a more useable form.

⁴⁴ The count of firms from the 2002 survey of Business Owners is for an earlier time than the counts presented here, which are fairly current.

- 74% of minority contractors and 34% of non-minority contractors reported that a lack of working capital had kept them from bidding on projects;
- 18% of minority contractors and 3% of non-minority contractors reported that a lack of working capital had kept them from successfully completing an awarded project;
- 26% of minority contractors and 17% of non-minority contractors report that they are not able to obtain bonds; and
- For those who are able to get bonds, the medians of the maximum bonding levels were \$1 million for minorities and \$2.5 million for non-minorities.

If existing minority contractors had better access to working capital and bonding, their capacities would surely increase in the medium-term.

Data from the survey of contractor reveal the following comparisons of female-owned and male-owned contracting firms:

- 24% of female contractors and 19% of male contractors do not have credit in the form of lines of credit, equipment loans, or term loans;
- 59% of female contractors and 52% of male contractors reported that a lack of working capital had kept them from bidding on projects;
- 11% of female contractors and 10% of male contractors reported that a lack of working capital had kept them from successfully completing an awarded project;
- 20% of female contractors and 21% of male contractors report that they are not able to obtain bonds; and
- For those who are able to get bonds, the medians of the maximum bonding levels were the same million for women and men.

The financial differences between female-owned and male-owned firms are not as large as the differences between minority and non-minority firms. Still, if existing female contractors had better access to working capital and bonding, their capacities would increase in the medium-term.

4. Measuring Long-Term Availability of Contractors

Measures of long-term availability of contractors should reflect the minorities and women who would be *interested* in becoming construction contractors if there were no discriminatory barriers to their participation. We are aware of no way to measure long-term availability directly. Many small specialty contractors are former building trades journeymen. As an example, the Sheetmetal Workers union provides training to journeymen who aspire to become sheetmetal contractors. It could be argued, therefore, that the long-term availabilities of minority and female contractors are similar to the long-term availabilities of journeymen.

5. Measuring Utilization of Contractors

Utilization of available minority and women contractor depends on project owners' choices among contractors and contractors' choices among subcontractors. Utilization of a race, ethnic, or gender group of contractors can be defined in different ways. By looking at multiple utilization measures, we should gain a more complete understanding of factors that limit inclusion of minority and female contractors. It should be noted that not all of the measures discussed in this section are currently available, but they could be obtained through a cooperative effort of unions, contractors, and owners.

There are some available data on numbers of contracts and sub-contracts awarded on public construction projects and the distribution of those awards across contracting firms owned by minorities, women, and white men. Counts of contract awards are potentially misleading, however because contracts can be of very different sizes. There are also some other data on the dollar amounts of contracts and sub-contracts awarded on public construction projects and the distribution of those dollar awards across contracting firms. Likewise, amounts of contract awards are also potentially misleading because in some cases sub-contractors do not actually perform the work that is initially awarded to them.

The best utilization measures would be based on work *actually performed*. In its June 2008 report to the City Department of Finance, Econsult Corporation observed:

The methodology of the Disparity Study can also be further honed to more directly shed light on minority, woman, and disabled participation in the broader economy. For example,

participation rates are currently measured according to contracts awarded (to prime contractors) and dollars promised (to sub-contractors). There are certainly variances in the amounts the City awards to winning bidders and the amounts that are actually paid for those contracts, and there are also certainly variances in the amounts prime contractors promise to sub-contractors that they have enlisted to be part of their team and the amounts that are actually disbursed to those sub-contractors.

Since it is the actual funds disbursed and not those awarded that constitute economic gain, the calculated results of a Disparity Study will differ from what is actually taking place in reality to the extent that such variances exist. Currently, MBEC and the City do not have the technological or organizational infrastructure in place to measure either dollars disbursed by the City to prime contractors or dollars disbursed by prime contractors to their sub-contractors, but measuring those amounts would ensure that a more direct accounting of the distribution of economic gains was made.
(Econsult Corporation 2008)

We understand that the Office of Economic Opportunity is pursuing the collection of data on actual disbursements, and we would urge the continuation of that effort.

B. Barriers to Minority and Women Owned Businesses

Minority and women owned companies face extremely risky challenges. The construction industry is one of the highest risk and least forgiving businesses in American industry. Many owners and contractors are hesitant to hire minority and women owned construction companies because of the perception that these companies are not reliable and perform substandard work.. Because there are very few success stories, the industry as a whole would prefer to find alternate means of meeting the inclusion goals such as purchasing supplies through minority and woman owned vendors or hiring minority companies as labor brokers.

Many of the established companies are too small to bid on anything but very small projects, and most do not survive. Even if a business survives the start-up years, an event completely beyond its control could severely impact its ability to survive financially. Further, it is often more difficult for young companies to be competitive against larger more established competitors. In the following three sub-sections, we list a few of the more common challenges that small and newer subcontractors face.

1. Operational and Financial Challenges

- Access to cash and ability to capitalize the company at the right level.

- Ability to network to get on bid list, bid competitively, win work, perform the work, make money.
- Ability to attract and retain employees who know the business and can deliver profitable and successful projects.
- Ability to provide compensation and benefit packages on par with your competitors.
- Ability to meet your payroll and union dues weekly. Ability to post a bond to the union.
- Establish effective book keeping and accounting systems to track your profits and loss.
- Ability to obtain insurance and accept the fact that younger companies have to pay higher premiums than established firms. Higher insurance rates must be absorbed into a younger company's fee or profit.
- Ability to bond or get non-bonded work.
- Ability to hire an estimator who can bid competitively and ability to hire a workforce who will be profitable.
- Understand that financially unstable subcontractors do not attract the most talented workers who are fearful that the subcontractors cannot pay their benefits.
- Ability to maintain a constant work flow both for cash flow purposes and to keep your profit-making crews working. Once talented people are lost, it is often difficult to get them back.
- Ability to pay vendors and subcontractors quickly as they can make or break the company on bid day by giving a higher price to the contractor who has been slow to pay in the past.
- Small companies have a difficult time getting the best prices from vendors because they don't buy at the same volume of product as the bigger companies. It is often very difficult to compete price-wise.
- Many smaller companies cannot afford to own their own equipment. They need to rent the equipment and include that cost in their bid price. Older more established

companies own their equipment and may have paid off the loans. They do not have to include these costs in their bid and therefore are more competitive.

2. Barriers to Bidding Public Works Projects

Our survey revealed that one of the most formidable barriers to minority contractors seeking to bid on public works projects was limited access to credit and bonding.

3. Barriers to Bidding Private Sector Projects

The private sector is under no obligation to notify the public when bidding construction projects. Private sector bids are typically by invitation only. Minority and women owned general contractors and construction managers must develop marketing plans and relationships to be placed on bid lists as preferred vendors who are then invited to bid on projects. It can be extremely difficult getting access to the right decision makers. Minority and woman owned firms need to market themselves like any other well established firm.

C. Best Contracting Practices

This section discusses practices that have proven to work for many contracting firms that have been able to work on public sector and private sector projects. It draws heavily on material developed by the Small Business Administration.

1. Preparing to Compete

Understanding the Regulations: Every city entity has its own set of rules for doing business. It is incumbent upon each business to understand the various procurement processes. For example, do they have set-aside programs; are there certifications requirements to compete for contracts; is there sole-source opportunities based on certifications? If there is a certification process, how long is the certification process?

Understanding the Requirements: Governments tend to be inflexible regarding changes in what is required. The Request for Proposals (RFP's) clearly outlines what is expected of the bidders. Each RFP will define how the proposal should be structured and formatted. The RFP will provide a Statement of Work in which the bidder must address in their responses how their approach offers the government the best value. The

evaluation criteria will provide information on how each proposal will be evaluated. Before responding to any RFP, contractors should make sure they have thoroughly read each component of the RFP to make sure they are in compliance. If they are not, they will not be considered responsive to the request for proposal – their bids will be thrown out.

Understanding the Target: The “City” is not one customer, but many customers under one umbrella. It is important to understand the organizations and the relationships among them. Before marketing to one particular agency, contractors must understand how the organization functions and how the organization is structured. The organizational structure will assist in determining the relationships between and within those organizations.

Research: City agencies are trying to complete a mission and all of the products and services they buy are designed to help them complete that mission. The better a contractor understands the mission and can speak to it, the more successful it will be. The research can begin by first understanding the agency’s mission and how a contractor’s products or services can benefit the agency. Some agencies will provide a forecast of procurement opportunities. Contractors should obtain a listing of the agency forecast, as well as active contracts, and determine what products or services they can offer the government.

Developing a strategy: Based on research and data gathered, the contractor should create a list of initial target customers and a strategy to penetrate them. Some agencies may be targets for a firm as a prime contractor. To work for other agencies, a firm may need to work with other firms as a subcontractor. The list of targets should be expanded as needed. Marketing materials should be tailored for targeted agencies. Each agency wants to know that contractors understand who they are and what their mission is. Tailored marketing materials allow an agency to know that the contractor understands who they are and how the business can benefit them.

Knowing competitors: An individual contractor needs to know what its competitors are doing and how they are successful so that it can match or better their arguments. Understanding one’s competitors allows one to develop a strategic plan in marketing to the agencies. For example, an incumbent currently has a contract and is no

longer able to compete on that contract. One could choose to team with the incumbent to bid on the contract, which could make the government customer more comfortable because of the continuity that is provided. But by meeting with the agency, one may determine the better strategy is to bid alone because the incumbent was not able to overcome certain obstacles, and having the incumbent as part of one's team would be a detriment.

2. Approaches to Competition

Developing relationships: Firms can use their research as talking points to get a dialogue going with an agency target. The dialogue is likely to lead to a working relationship that can open doors to opportunities. If one has properly researched an agency, one will have identified contract opportunities that will allow one to have a dialogue about that particular contract before the actual solicitation is issued. One will have the opportunity to understand the nuances and challenges that particular agency has had with the contract and one can use that to his or her advantage when responding to the RFP.

Recruiting a Champion: One should develop a strong relationship with a key individual that can act as his or her champion and go to bat for him or her inside a targeted organization. If one has developed strong relationships within the agency, many times this can lead to many opportunities. Agencies are always looking for competent businesses because their performance on contracts is a reflection of the agency.

Training on-site staff to be a part of the sales team: Project managers and other workers on a government work site can be the best sales people. They can uncover new opportunities as they are developing creating the opportunity to start early on the bidding process. Training is key to the success of any business. One should make sure that the team understands exactly what products and services are offered by the business. If the team understands the business, then they are in a better position to identify potential opportunities within an agency.

Creating an elevator pitch: One never knows who is going to run into a potential champion or decision-maker. Employees have personal lives, and they may intersect with the people a business wants to reach in very unlikely places. Weddings, parties,

other social events, and chance encounters in elevators can all be used to begin business relationships. All employees should know their company's 20-second "elevator pitch" to be able to start the discussion on new opportunities. Firms should train their employees become part of the sales team.

3. Business Process

Starting Small: Governments tend to be risk-averse with tax payer dollars. New firms need to be willing to take on smaller projects to begin to establish themselves and take small assignments seriously. They represent the best chance to prove the firm's capabilities to the government agency and to the decision-makers there. That same risk-averse attitude works in the firm's favor if it is successful in those smaller opportunities. The agency will consider the firm for larger opportunities, and because the firm has a known track record, the likelihood of winning some of those contracts will increase.

Performance is Key: Minority status doesn't mean anything if the firm is not performing. The government may get kudos for hiring minority firms, but will also get raked over the coals if the contractor is not providing adequate products and services at a fair price. All firms, minority or not, must perform to be successful. Performance also leads to additional work. When a firm is successfully performing on contracts, the agency takes note. It shows that the firm understands them as a customer, and they are more willing to consider it for follow-on and/or larger contracts.

The Power of Partnership: Many small business owners believe that they have the resources to be a "one-stop shop" for customers. Because the firm is small, it can be nimble and can adapt to whatever needs the customer has. Although small businesses are indeed nimble and adaptable, they likely can't do all of the work in a cost-effective way, particularly as requirements become more specialized. Owners of small minority businesses need to use partnerships with other firms to subcontract out work that can improve their bids and their performance. A big part of partnering is knowing one's strengths and weaknesses. As one creates partnerships and teaming arrangements for different contracts, one should make sure that all members of the team are being utilized correctly. The focus should be on providing the greatest value to the customer, because when the customer is happy, the firm will be rewarded.

Fine-tuning Pricing: For most government bids, listing direct costs and overhead is not enough. Regulations will require a break-down of all costs, both direct and indirect. Firms must be prepared to outline specific costs concerning overhead pools to show the government procurement entity how overhead costs were calculated. Although this may seem to be a bother for a small business to have to do, one can turn it into a positive. With a more complete picture of one's costs, one can better bid your jobs and know where one can negotiate. Having this information can provide a significant competitive advantage, particularly with government agencies that are focused on getting the best price.

"Horse Trading": A subcontractor is likely to have the opportunity to negotiate all or part of its contracts at some point. In order to be successful at this part of the process, one must understand all cost figures and where one can reduce costs and still make a profit. It is not acceptable to agree on a price and discover later that you are losing money.

If you encounter a sudden shift in your expenses (particularly direct costs for the contract), you can make a business case to the government to request additional funding. Such an increase is not guaranteed, but if the firm is a solid business partner, the government will be like any other customer. They want to keep their contractor happy because it helps that agency meet its needs. However, after the contract is awarded, the government will not increase your contract price just because the contractor made a mistake. It is up to the contractor to ensure that the contract will be profitable, not the government.

4. Strategies for Growth

Knowledge of Strengths and Weaknesses: When a small contracting firm has had some success and wants to grow, particularly in the government marketplace, it must identify its own personal strengths and weaknesses. For instance, if the owner is the primary project manager as well as the primary administrator for the firm, he or she may begin to be stretched too thin trying to manage the details of the government contract while simultaneously running the business. One area or the other may start to slide; either the projects will run into problems because the owner is focusing on the business,

or the business will not experience growth because the owner is focused on the projects. The owner needs to decide where his or her abilities can best be used and find other resources to fill the gaps.

One area in which small business owners often fall short in is marketing. Many small business owners understand their industry, but not the nuances of selling products and/or services in that industry. If the owner is not good at sales and/or marketing, he or she should hire someone who is. They may not be as passionate about the business as the owner, but a good marketing person can still be more successful than an owner who does not present the firm well.

Investing in the Government Market: In some ways, the government construction market is like any other new market a contractor might want to enter. The firm will need to make investments in that market if it is going to be successful. For example, if a firm wanted to open a second location in Chicago, it would make an investment. It would research the best location, purchase or lease space, furnish the space, purchase or lease equipment, hire staff for the office; market the firm to potential customers there; etc.

The government is not just “some other customer” – a firm needs to invest in this customer. It needs to invest time to understand the unique procurement process of this customer; understand the requirements, learn who the decision makers are and who influences those decision makers, and perhaps even investing in a marketing campaign specific to this customer.

Persistence Pays: The government is one of the most attractive markets for firms to pursue, so there is a lot of competition. Persistence will get a firm in the door. Most firms will give up trying to get into the government market simply because they don't want to make the right investment. Government employees who advocate for small businesses are often overwhelmed with phone calls and emails from small businesses that are looking for government contracts. One should not be discouraged if they do not return a call or email right away. One simply needs to follow up, and follow up, and follow up.

Proving that the Firm is Responsible: In this context, responsibility means that the firm has the capability to meet the demands of the government contract, particularly financially. Small businesses pose a greater risk to governments due to the reduced

financial capabilities of those businesses. An unexpected expense may be a minor hiccup to a medium or large business, but can create major problems for small businesses.

Therefore, government procurement agencies take a very close look at the financial health of any small business that they might contract with. Firms must show the procurement manager that they definitely can perform the contracts financially, or have the financial backing already in place to do so.

Considering Subcontracting: As a business strategy, a firm that wants to grow should consider becoming a subcontractor to a larger firm that is performing contracts with an agency with which the smaller firm would like to do business. This approach will allow the smaller firm to gain a reputation (as a sub) to the government procuring agency. Being successful as a sub can help a firm establish a good reputation in the market and that could open future opportunities.

Subcontracting comes with positives and negatives. The positives include the fact that one is doing business with another company; it's a business to business relationship with which smaller firms are familiar. Another positive is that the government agency will not hold the subcontractor responsible for any problems that might occur; that falls to the prime contractor. The primary negative of subcontracting is that subcontractors usually do not perform the bulk of the work on a contract. Most government contracting regulations require the prime contractor to perform at least 20% of the work. If a subcontractor is not doing the majority of the work, it will not capture the majority of the profits.

D. Findings on Contracting

1. City Contracting Compliance Agencies

The Commission has reviewed the activities of the Office of Economic Opportunity and its predecessor the Minority Business Enterprise Commission. It is the view of the Commission, and we believe of the new leadership of OEO, that the City currently lacks an effective municipal certification process as well as effective processes for monitoring and enforcement. Participation data are not verified.

Under MBEC, compliance monitoring was virtually non-existent in the construction contracting arena. There was virtually no enforcement implemented against contractors that violated their minority participation agreements, even though such penalties (including loss of contracts, fee assessment and debarment) had been written into the City's executive orders. Unless the City's approach to monitoring, compliance and enforcement are substantially improved, Philadelphia will continue to produce highly inflated, unsubstantiated participation levels. As a result, there will be less true opportunity for authentic minority, female, and disabled owned construction firms. The current public OEO database is incomplete and it lacks potentially useful information regarding the capacity of certified firms in terms of project size, financing.

2. City as Project Owner

Virtually all minority and female participation has been at the material supplier or subcontractor level (data available from disparity studies). As was discussed in a previous section of this report, there is an inherent disadvantage for firms limited, solely, to subcontractor status because as subcontractors they will usually not capture the majority of project profits. The Commission believes that bonding and financing are the primary impediments to their competing with majority contractors for prime contracts.

The minority, female, or disabled contractors are only able to compete for subcontracts, and they have difficulty still – sometimes because of financing or other capacity issues but also because prime contractors are often allowed to use minority, white female, or disabled materials suppliers to meet participation goals imposed by public or private owners.

Financing becomes much more difficult when the City is slow to pay prime contractors and/or prime contractors are slow to pay their subcontractors for completed work. There is currently no way that subcontractors can know whether the prime has been paid, and the City does not track to see when primes pay their subcontractors. The City has not incorporated software systems that will allow its procurement officers, OEO officials and participating contractors to monitor payments to primes and subcontractors.

3. Minority, Women and Disabled Contractors

Without question, there is a significant and ongoing need for trade-specific business planning, training, technical and management assistance and working capital financing, if the City of Philadelphia is seriously committed to the growth of minority and female construction firms.

E. Recommendations, Goals and Strategies for Inclusion

1. Philadelphia City Government

Recommendations: City Oversight and Support

It is extremely important that the City oversee the inclusion of male minority, female, and disabled contractors, not just in its own projects, but in all construction projects across the City and the region.

(1) The City should improve its data and monitoring systems as a foundation for oversight. The City should assemble data on the participation of male minority, female, and disabled contractors in the regional construction industry. The first step should be to assemble a consolidated list of MBE, WBE, and DBE contractors who are available to conduct projects in the Philadelphia area. The list should record type of work, contact information, MBE/WBE/DBE status, and some measure of capacity (e.g., annual volume or largest project completed).

(2) The City should develop and update goals for inclusion of male minority, female, and disabled construction contractors in the regional construction industry. Goals should be expressed in terms of both available capacity and utilization of that capacity.

That is each trade should achieve an increase in its rates of inclusion every year. If a steady increase in rates of inclusion (i.e., several percentage points) is not seen over a period of several years, that trade's progress should be a source of concern.

(3) The City should measure annual progress toward the inclusion goals.

The Commission recommends that the new Office of Economic Opportunity be responsible for collecting and disseminating all data on the inclusion of male minority, female, and disabled contractors.

(4) The City Office of Economic Opportunity should prepare quarterly reviews of inclusion data for presentation to the Mayor's Economic Opportunity Cabinet and an annual "Inclusion Report Card" for publication. Both types of reports should include measures of changes in participation of minorities and women.

(5) The City should develop a database of all general contractors and construction managers that subcontractors can use to market their services. The database should track current work being bid and identify all forecasted and upcoming projects.

(6) The City should develop a website, similar to Face book or MySpace, to describe the project experience, capacity and resumes of each certified company.

(7)The City should establish a marketing training program to assist minority and women firms create marketing materials.

Recommendations: The City as Project Owner

As we noted in the section on workforce inclusion, the City of Philadelphia is the owner of many construction projects, so it has the ability to establish inclusion goals, monitor the pursuit of those goals, and require compliance. Before it can take full advantage of its ownership position the City needs a complete understanding of inclusion in its recent projects.

(8) The City should conduct a baseline analysis of the current participation of male minority, female, and disabled contractors in its recent construction projects.

(9) The City should set achievable goals for participation of male minority, female, and disabled contractors.

(10) The City should require bidders on public projects to document their efforts to include minorities and women in their privately funded projects.

(11) The City should avoid waivers of participation requirements except where genuine good faith effort is documented. Contractors should be expected to exhaust a valid list of available subcontractors before seeking waivers.

(12) The City should unbundle large projects whenever it is possible to do so without significant increases in cost.

(13) The City should review all post-award changes in roles of minority and female subcontractors and approve only where genuine good faith effort is documented.

(14) The City should limit opportunities to use minority and female materials suppliers to fulfill minority and female participation requirements.

(15) The City should create a City wide web-site to include:

- ***Bid opportunities***
- ***Upcoming projects and bid forecast***
- ***Certification process***
- ***Check payment status of prime contractors***
- ***Bank & Bonding institutions who work with MBE/WBE***
- ***Marketing profiles of certified companies***
- ***Banking and lending forecast***
- ***Links to the TAC and PIDC loans***
- ***FAQ***
- ***Blog to discuss the road blocks and hazards of the industry.***
- ***Business Health Check Up's – opportunities for company evaluation of AR, accounting systems, loans, lines of credit, contracts, etc.***
- ***Construction and Business Management Courses through Temple & the SBA***

The Commission believes that the City's Office of Economic Opportunity (OEO) should be the entity responsible for developing project goals for contractor inclusion in City funded construction. OEO should monitor achievement of goals, have authority to take appropriate enforcement action for noncompliance and administer a quarterly and annual report. The report(s) will account for the participation of minority, white female, disabled, and Philadelphia resident contractors as a percentage of all contractors participating in City-funded construction and should be furnished to the Mayor's Economic Opportunity Cabinet and City Council. Reports should track participation of minority, white female, disabled, and City contractors in all City construction projects, so data can be used to analyze past experience, set realistic and achievable goals, and determine appropriate interventions. Long-term tracking should include numbers/percentages of male minority, female, and disabled contractors on each project.

In addition to changing its solicitation process as recommended above, the City could help improve access to credit, bonding, and insurance.

(16)The City should reduce contractors' needs for credit by expediting payments to general contractors, requiring expedited payments to subcontractors, and reducing retainage on small projects.

(17)The City should explore innovative ways to reduce the barriers created by bonding requirements including state legislation to allow selective reduction of bonding requirements.

Recommendations: City Leadership

As we said in our workforce recommendations, the City should be a major advocate for change in the private sector. The Commission believes that the City should seek engagement of large anchor institutions (universities and hospitals) to establish similar goals. Goals should be set based upon accessible availability and utilization data and other reasonable measures. While recognizing the legal constraints of narrow tailoring when establishing any race conscious remedies, goals should be "stretch" goals (achievable with best efforts), based on availability of journeymen and apprentices, specific to each union. Consequences of noncompliance (i.e., failing to use best efforts) should be clearly articulated to contractors and enforced. Incentives should also be designed to encourage goal achievement.

(18) The City should develop and consistently communicate the message that goals of inclusion and equal opportunity should be standard for the construction industry in Philadelphia in both public and private sectors.

(19) The City should identify decision makers at every tier of the construction industry and educate them of this policy. The education process should include formal outreach to specific private project owners, lenders, bonding agencies, and insurers.

(20) The City should initiate and support a public/private partnership with larger GMs and CMs to develop a mentorship program to strengthen the capacity and enhance the growth of emerging minority contractors.

(21) Establish an ongoing collaborative and meaningful dialogue including local construction users and owners, contractors, unions, educational institutions, social service intermediaries and other interested parties on construction industry workforce demographics and development. Use the results of this dialogue to develop a practical, results-oriented and performance based implementation of: 1) Commission recommendations, 2) Availability and Utilization Study results, and 3) initiatives developed by this collaborative effort.

(22) The City should establish an ongoing Advisory Commission on Construction Industry Diversity including union leaders, large and small contractors, public and private project owners, and community leaders.

2. Private and Non-Profit Sectors

(23) Develop a database of private sector companies, non-profits and universities who engage in capital projects.

(24) Establish a consortium of 10 private sector companies who will institute an economic opportunity plan within their procurement departments to establish and achieve contracting goals.

(25) Develop a marketing plan for MBE/WBE contractors to market to the Private Sector potential clients.

(26) Develop a semi-annual report of public and private-sector organization participants in minority contracting.

Owners must recognize that they have the greatest leverage to increase minority and women participation in the building trades – contractors want their business, unions want their work. Owners must exercise this power to make workforce diversity a reality by insisting that minority and women workers are used to the maximum extent possible on their projects. Owners may consider adopting project goals similar to the City of Philadelphia. The expectation of a diverse workforce should be communicated to the contractors and subcontractors at all tiers, as well as the unions.

(27) Project owners should make best efforts to contract with to use male minority, female, and disabled contractors and subcontractors on their projects.

(28) MBE/WBE/DBE Prime contractors should market to private sector owners directly.

(29) General contractors should strive to include male minority, female, and disabled subcontractors on their projects.

(30) MBE/WBE/DBE subcontractors need to market to general contractors and construction managers who bid private work.

(31) Successful general contractors, construction managers, and subcontractors should develop a mentorship program for aspiring MBE/WBE/DBE contracting firms. The program should include:

- *Evaluation of company's current bookkeeping*
- *Accounting Systems (AR, AP, Equity, Cash Flow, and Loans)*
- *Overall Financial Stability*
- *Evaluation & Capability of Current Employees*
- *Estimating Practices*
- *Operating Procedures*
- *Computer Systems*
- *Safety Plans*
- *Contracts*



V. THE WORK THAT REMAINS

We have addressed this report, not only to Mayor Nutter but also to City Council, the Office of Economic Opportunity, other City departments, unions, contractors, owners, educators, the business community, community-based organizations, and individual citizens in the hope that all of them will consider the steps that we have recommended. We realize that there may be differing views regarding our specific suggestions, but we hope that all who read this report will share our commitment to increase the inclusion of minorities and women in the Philadelphia area construction industry, as both workers and contractors. That shared commitment should be the foundation of a common plan to open up the construction industry to all.

The City must devote increased attention and additional resources to the creation of a new administrative approach that will change the way City construction projects are conducted, but the City cannot stop there. Because so much construction activity in the Philadelphia region is privately funded, the City must inspire and monitor increased inclusion of minorities and women in privately funded projects.

The City cannot meet the challenge alone. Many of the changes we have recommended require the efforts and/or cooperation of unions, contractors, owners, educators, the business community, community-based organizations, and individual citizens.

As members of the Commission, we realize the need for a sustained multi-year effort by all concerned, and we pledge to join in that effort as individuals or as a permanent Commission if the Mayor so chooses.

Because of the urgency of many of our recommendations, we have provided a recommended timeline for the implementation of our recommendations in Appendix 19. The implementation of the majority of our recommendations can and should begin immediately and show substantial progress by mid-2009. Other recommendations will take somewhat longer to implement, but we believe that substantial progress can and should be made on all but a few recommendations by the end of 2009. It is time to begin.

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VII. BIOGRAPHIES

COMMISSION MEMBERS

Dr. Bernard E. Anderson, a product of South Philadelphia, is a nationally respected economist who recently stepped down from the faculty of the Wharton School, University of Pennsylvania, where he was the Whitney M. Young, Jr. Professor of Management. He is the author of five books and numerous journal articles on the labor market, employment policy, and the economic status of African Americans. He also served as Assistant Secretary for Employment Standards Administration, U.S. Department of Labor, during the Clinton administration.

Emily L. Bittenbender is the Managing Partner of Bittenbender Construction, LP. Emily's career focus has been the design, construction and renovations of public buildings and spaces. Early in her career she was hired by the Rendell Administration to jumpstart the paralyzed system of completing over 300 backlogged capital construction projects with city government. As Philadelphia's first Capital Program Director for the CPO, Emily was charged with the responsibility of bringing private sector business practices to the city and completed those projects in 3 ½ years time. In January 2000, Emily was hired as the Vice President of Design & Construction for the National Constitution Center to lead a team once again in the design and construction of a \$137M museum in Independence Mall. After the completion of the National Constitution Center, Emily started Bittenbender Construction, LP, a commercial and renovations of museums and historic sites, retail and corporate fit out projects (the only woman owned, union affiliated general contractor in the local area). Bittenbender Construction recently celebrated it's five year anniversary with a highlight of completed projects in the Philadelphia Business Journal.

A. Bruce Crawley is president and principal owner of Millennium 3 Management, Inc., a Philadelphia-based marketing communications and consulting firm. Prior to starting his own business, Crawley was employed at First Pennsylvania Bank, where he served as vice president/advertising director and senior vice president/director of public and investor relations. Active for years in the Philadelphia hospitality industry, Crawley served for five years as chairman, and still serves as a member of the board of the Philadelphia Convention and Visitors Bureau. He was also a co-founder of the Convention Bureau's Multicultural Affairs Congress and a founding member of the Greater Philadelphia Tourism Marketing Corporation. In 1993, Crawley founded Philadelphia's African-American Chamber of Commerce and served as that organization's board chairman for 13 years. He currently serves on the boards of Independence Blue Cross, the board of trustees at St. Joseph's University, the University's Haub School of Business and the Technical Assistance Center for Emerging Contractors, among others. He holds a B.S. degree in marketing management from S. Joseph's University and a master's degree in journalism from Temple University.

Sharon M. Dietrich has been an attorney with the Employment Law Unit of Community Legal Services, Inc., since 1987. She became CLS' Managing Attorney for Public Benefits and Employment in 1997. She represents low income persons in employment matters. From 1994 through 2004, she also worked as a contract attorney with the National Employment Law Project, New York. Since joining CLS, Ms. Dietrich has represented the plaintiffs in Commonwealth of Pennsylvania and Raymond Williams v. Local 542, International Union of Operating Engineers, Civil Action No. 71-2698 (E.D. Pa. filed 1971). In this action, the union was found to have intentionally discriminated on the basis of race in the entry into the union and employment of minority operating engineers. The case remains pending before the Honorable Joel H. Slomsky, in an effort to continue to remedy of the present effects of past discrimination.

John W. Macklin was hired by Dr. Edward Robinson, Assistant Managing Director under Mayor W. Wilson Goode on August 11, 1981 as his Minority Business Specialist. In 1985, Macklin was appointed to be Special Assistant to the Director of Minority Business Enterprise Council, Curtis Jones Jr. On April 10, 2000, he was recruited by the President of City Council Mrs. Anna Verna as her Minority Opportunity Officer. He was her representative for the Construction of the Philadelphia Eagles and Philadelphia Philly's stadium projects. Macklin retired from City Council Office on December 1, 2003. He organized the Philadelphia Chapter on the National Association of Minority Contractors. Macklin lobbied NAMC to have its 35th Annual Conference at the Loew's Hotel. Macklin was recommended by Senator LeAnna Washington to receive the David P. Richardson National Builders Award at the National Black Caucus of State Legislators 37th Annual Conference in Jackson Mississippi, December 1, 2006.

Sharmain Matlock-Turner is the President and CEO of the Greater Philadelphia Urban Affairs Coalition (GPUAC). Ms. Matlock-Turner has served in this role for ten years. As the first woman to lead GPUAC in its 40-year history, Ms. Matlock-Turner guides the organization to fulfill its commitment to improve the lives of working families in the Philadelphia region. GPUAC's mission is to unite government, business, neighborhoods and individual initiative to improve the quality of life in the region, build wealth in urban communities and solve emerging issues. As a fiscal sponsor, GPUAC represents a coalition of 90 grassroots organizations with over 500 employees serving tens of thousands of residents throughout the Philadelphia area. Prior to joining GPUAC, Ms. Matlock-Turner served six years as associate vice president for legislative and community affairs for Mercy Health System and ten years as chief of staff to the late State Senator Roxanne H. Jones. Ms. Matlock-Turner is active in the Philadelphia community and serves on numerous boards and commissions. Ms. Matlock-Turner chairs the boards of trustees of the West Oak Lane Charter School, the Ogontz Avenue Revitalization Project (OARC) and the Peoples Emergency Center. She is a member of the Board of Directors of LaSalle University, The Reinvestment Fund, United Way of Southeastern Pennsylvania, the Philadelphia Facility Management Corporation with Philadelphia Gas Works (PGW), and serves on the Economic Advisory Council of the Federal Reserve Bank of Philadelphia. Ms. Matlock-Turner is widely considered one of the region's most influential leaders winning numerous awards and honors throughout her

distinguished career. Ms. Matlock-Turner holds a BS degree in Education from Temple University.

Walter P. Palmer III, President & CEO of the General Building Contractors Association (GBCA) joined the GBCA in 1986 as Director of Education, after graduating from Temple University. In 1994 he was named Vice President, and served in this capacity for the past nine years. During his tenure, he developed the Mentor-Protégé Initiative, a program serving disadvantaged and emerging contractors, and served on the original Board of Directors for the Charter High School for Architecture + Design (CHAD), which is the first school of its kind in the nation. He is actively involved with legislation and government relations, and works closely with the American Institute of Architects (AIA) and the Center for Architecture in Philadelphia. He also currently serves as the Executive Director of the Associated Master Painters and Decorators Association (AMPD), and as a management trustee on several Taft-Hartley Pension, Health & Welfare, and Apprenticeship funds for the construction industry.

Councilwoman Donna Reed Miller has been a dedicated public servant all her adult life. For the past thirteen years, she has served as City Councilperson representing the Eighth Council District. Before coming to City Council, Councilwoman Miller served as Executive Assistant for the late State Representative David P. Richardson for nine years. During her career she has championed many causes that positively affected all Philadelphians. One of her most notable accomplishments was in the area of workforce diversity where she challenged the Building Trades Unions and won a landmark agreement between the unions and the Commonwealth of PA, the PA Convention Center Authority and the City of Philadelphia. This agreement has opened doors for many of Philadelphia's minorities who have historically been kept out of the hiring process. Councilwoman Miller is the Chair of City Council's Public Safety as well as the Disabled and Handicapped Committees. She is the Vice-Chair of the Public Health & Human Services Committee; and formerly chaired Philadelphia's Black Elected Officials. Councilwoman Miller has a graduate degree in Administration and Organizational Development.

William R. Reddish, III, is currently the president of Gensis Group Ltd., a construction and development company, based in Philadelphia, PA. In his role as president, Mr. Reddish is responsible for all phases of residential and commercial development. He assumes responsibility for all construction projects including commercial development, single-family housing development, special needs housing and multi-family housing development.

Robert J. Reinstein is a Professor of Law at Temple University Beasley School of Law. He has served Temple with his global vision, thoughtful leadership and constant dedication fulfilling administrative, managerial and academic roles as Temple University vice president, dean of the law school and professor of law. Professor Reinstein, who teaches Constitutional Law, resigned as dean of the law school in 2008 after 19 years to pursue his "first love" - teaching and scholarship. He has been a member of the Temple University faculty since 1969. In 1970, he became a consulting attorney for the NAACP,

and participated in a number of successful class action civil rights cases, including those that led to the integration of the Philadelphia Police and Fire Departments, the Pennsylvania State Police and the Local 542 of the Operating Engineers Union. In 1977 he joined the U.S. Department of Justice as a senior attorney in the appellate section of the Civil Rights Division and from 1979 to 1980, headed the general litigation section. Professor Reinstein earned a J.D. from Harvard University School of Law in 1968 and a B.S. from Cornell University in 1965.

Joseph Sellers, Jr., started his apprenticeship as a sheet metal worker in 1980. He became a journeyman four years later. In 1994, he was elected to his first term on the Local 19 Executive Board. Joe was appointed to the position of Training Coordinator in 1996, a position of Business Representative. Two years later, Joe was unanimously appointed by the Local 19 Executive Board as President and Business Manager and in June 2003, he was overwhelmingly elected to this same position. In 2006, he ran unopposed and was re-elected to another 3 year term. During his tenure as President and Business Manager, he holds the following positions and offices: President of Pennsylvania State Council of Sheet Metal Workers, New Jersey State Council of Sheet Metal Workers, Mechanical Trades District Council of Delaware Valley, Metropolitan Association of Presidents and Business Representatives, Board of Directors for the National Energy Management Institute (NEMI); Secretary/Treasurer of the Mechanical and Allied Crafts Council of New Jersey; Vice-President of the Philadelphia Building and Construction Trades Council, Philadelphia AFL-CIO, Youth to Youth Market Development Council; Executive Board Member of the Pennsylvania Building & Construction Trades Council and the Pennsylvania AFL-CIO; and a member of the Pennsylvania State Apprentice and Training Council.

Narasimha B. Shenoy, P.E., is the President and CEO of KEDAR Corporation, a construction management and design build company. Mr. Shenoy has 30 years of experience in engineering construction and project management in industrial, commercial, nuclear and aerospace programs. He holds a master degree in Electrical Engineering, Executive MBA from Drexel University and a professional engineer's certification. He has served in many business and community organizations in Greater Philadelphia for more than 25 years. He serves as the Vice Chair for Governors Advisory Commission on Asian Affairs, Members of Mayors Advisory Commission on Construction Diversity, Zoning Code Commission, Board of Director of Philadelphia Multi Cultural Affairs Congress and as a Board member of Pennsylvania Minority Business Development Agency. He is a founding member and Executive Director of Asian American Chamber of Commerce in Greater Philadelphia.

Carl E. Singley, Esquire, has had a distinguished career as a lawyer in both the public and private sectors and also as a law professor and administrator. He has been actively involved in diversity and inclusion efforts for more than 40 years. Single is currently the chair of the Diversity Committee at the Wolf Block law firm and is vice chairman of the board of the Pennsylvania Convention Center Authority where he serves as chair of the Affirmative Action Oversight Committee. Singley was recently selected as the 2009 recipient of the Pennsylvania Bar Association's A. Leon Higginbotham Jr. Lifetime

Achievement Award, named in honor of the former chief judge of the U.S. Court of Appeals for the Third Circuit, which honors the accomplishments of an attorney or judge who has demonstrated true dedication to the legal profession and the minority community through civil, community or legal service. Singley was dean of the Temple University School of Law for four years and a law professor for more than 30 years. Singley received an LL.M. from Yale Law School, J.D. from Temple University School of Law and B.A. from Talladega College.

Samuel Staten, Jr. is currently the Business Manager of Laborers' Local 332 of the Laborers' International Union of North America. Sam Staten, Jr. started his career 37 years ago when he joined Laborers' Local 332 as a laborer. Samuel is a servant leader and both he and his members are committed to making the community a better place to work and live. He serves on many boards and commissions. In his spare time, Sam can be found playing basketball, horseback riding, cooking or playing a game of billiards. He is also the proud and dedicated father to his seven children and eight grandchildren.

Anthony J. Wigglesworth is the Executive Director of the Philadelphia Area Labor Management Committee (PALM), a private, non-profit organization fostering increased cooperation and efficiency in Philadelphia area industries. In this capacity, he oversees the overall operations of PALM and BUILT-RITE, the Construction Labor Management Initiative which he co-founded. Previously, he worked for the City of Philadelphia for six years, responsible for linking downtown economic development with community employment initiatives. A native Philadelphian, Mr. Wigglesworth graduated from the University of Pennsylvania in 1978.

State Senator Anthony H. Williams is an active legislator on a broad range of current and pressing issues. Williams has been a long-time supporter of diversity in trade unions and the construction industry, seeing that diversity is a economic engine through which to improve the 8th Senatorial District and Pennsylvania. While serving as a Pennsylvania Representative Williams co-founded and helped secure the initial funding for the Diversity Apprenticeship Program. He was also influential during the construction of the sports stadiums in Philadelphia, advocating for increased participation by persons of color in the development process. He is an original architect of school reform legislation for Philadelphia and a leader in the movement to expand the pipeline of scientific investigators and entrepreneurs of color in the biotech/life sciences industry. He serves as Democratic chairman of the State Government Committee and is a member of the Banking and Insurance, Finance, and the Environmental Resources and Energy committees, as well as the Life Sciences Caucus. He is also a member of the Pennsylvania Council of the Arts and chairs the Black Elected Officials of Philadelphia County, an ad-hoc group encompassing federal, state and municipal politicians of color.

Mario Zacharjasz, AIA is co-founder and principal of PZS Architects, LLC and president of Puente Construction Enterprises, Inc. As a child he emigrated from Cuba with his family and was raised in Puerto Rico. In 1982, he moved to Philadelphia to attend Temple University, where he earned his Bachelor of Architecture degree, and has called Philadelphia home ever since. In 1992, he and his partner founded PZS Architects,

and in 1996 they began Puente Construction. Today, PZS is working on some of Philadelphia's most exciting projects, and Puente Construction serves clients from Key West to Maine. Mario is committed to serving Philadelphia's diverse communities in many ways. He is dedicated to Philadelphia's non-profit organizations; actively working with groups such as Esperanza, the Salvation Army and Aspira, Inc. Mario is the President-Elect/Executive Vice President of the Philadelphia American Institute of Architects, and an executive board member and past board president of the Philadelphia Hispanic Chamber of Commerce. Mario was recently appointed by the Mayor to the Delaware River Waterfront Corporation Board. He serves on the Board of Managers for Moore College of Art and Design and is a former board member with the United Way of South Eastern Pennsylvania and the Pennsylvania School for the Deaf.

LEGAL COUNSEL

Michelle Flamer is a Senior Attorney in the Office of the City Solicitor. She joined the City's Law Department in 1984, serving first in the Legislation Unit and later in the Corporate Group's Finance and Contracts Unit. Ms. Flamer serves primarily as counsel to the City's Procurement Department and Office of Economic Opportunity and works on a variety of commercial transactions. Ms. Flamer received her J.D. from the Villanova University School of Law and her A.B. from Bryn Mawr College.

William Carter IV, Esq. is the Director of Legislative Affairs / General Counsel for City Council's Majority Whip Councilman Darrell L. Clarke. William is a graduate of Temple University School of Law, and has a BA degree from Hampton University.

William Kassab Nesheiwat is the Director of Legislation and Legal Council to City of Philadelphia Councilmember Donna Reed Miller. He is charged with the duty of drafting, interpreting, and advising on City and State legislation. As Council to the Chair of the Committee on Public Safety and the Committee on the Disabled and Handicapped, and also the Vice-Chair to the Committee on Public Health and Human Services, Mr. Nesheiwat serves as the clerk and works directly with Councilmember's, Administration, and the Public to foster good relations and successful City Council Hearings. Mr. Nesheiwat also works closely on the City of Philadelphia's annual \$3.4 Billion Budget, through the City of Council hearings; budgetary reductions and increases, and ultimately amendments. Mr. Nesheiwat received his J.D. from Western University College of Law in Fullerton, California, and his B.S. in International Business and Information Systems from California State University of Fresno.

PRINCIPAL CONSULTANTS

David L. Crawford, Ph.D. is the Founder and President of Econsult Corporation. For over thirty years, he has served as a consultant and expert witness on economic and statistical issues for private firms and government agencies. Dr. Crawford is also an Adjunct Professor of Management in the Wharton School of the University of Pennsylvania where he teaches managerial economics and human resources management. Dr. Crawford has consulted on human resource management issues for the Pennsylvania

Convention Center Authority, Delaware County (PA), the Administration Office of Pennsylvania Courts, and private employers. Dr. Crawford's litigation experience spans a wide variety of areas including employment discrimination, antitrust, personal injury, intellectual property, and damage analysis.

Tabatha Lupinetti, B.S., is a Senior Associate of Econsult Corporation where much of her work has focused on statistical analysis for equal employment opportunity litigation. She has extensive experience adapting data assembled by others to the needs of Econsult projects in litigation and other areas.

Benjamin Cromie, M.C.P. is a Research Analyst at Econsult where he focuses on economic development and GIS spatial analysis.

Rachel Brooks, B.S. is a Research Analyst with Econsult Corporation where she conducts economic and fiscal impact studies and analyzes public policy initiatives.

ADVISORS AND PROFESSIONAL STAFF

Kevin Dow is the Deputy Director of Commerce Neighborhood and Business Services in the City of Philadelphia and was appointed 2008. In this capacity, Mr. Dow helps lead the city's efforts to develop business friendly strategies to help both small companies and major corporations in Philadelphia thrive as well as to spur growth across key industry sectors. Mr. Dow has strategic oversight of the City's newly-created Office of Economic Opportunity and is responsible for the expansion and support of minority, women, and disabled-owned businesses. In addition, he provides leadership to the Office of Neighborhood Services and the Office of Business Services which include initiatives to support neighborhood commercial corridors, Business Improvement Districts, and many critical public investment programs.

Eva Gladstein serves as Executive Director of the 31-member Philadelphia Zoning Code Commission, created to reform and modernize Philadelphia's outdated and complex zoning code. Gladstein formerly served as Director of Special Projects for the City of Philadelphia Commerce Department, where her primary responsibility was managing the implementation of Economic Opportunity Plans to increase City utilization of minority, women, and Philadelphia residents in large-scale City-funded projects. Gladstein also served as the Director of Neighborhood Transformation for Mayor John F. Street, coordinating a communities, to ensure quality housing, clean and secure streets and vibrant cultural and recreational outlets. Prior to being appointed to this position, Gladstein served as the Executive Director of the Philadelphia Empowerment Zone under Mayors Street and Rendell for close to seven years. Gladstein began her career in the mid-1970s, co-founding and directing several non-profit organizations, and has worked consistently since then to implement self-sufficiency and community revitalization programs. Gladstein is an experienced trainer and public speaker. She lives in Philadelphia and has been on the Boards of a variety of civic associations.

Dr. Lucy Kerman is Vice President of Policy and Planning at the Greater Philadelphia Urban Affairs Coalition (GPUAC), where she oversees the Coalition's efforts around public policy, strategic planning, and advancement. Dr. Kerman guides GPUAC's policy agenda through the work of the Divisions of Working Families, Youth, and Economic Opportunity. As part of the Coalition's "actionable policy" approach, she builds collaborations for GPUAC with nonprofit, business, government and community partners throughout the Greater Philadelphia region. Before coming to GPUAC, Dr. Kerman was a member of the President's staff at the University of Pennsylvania, where she helped coordinate Penn's West Philadelphia Initiatives, a comprehensive and integrated approach to neighborhood revitalization. She is the author, with John Kromer, of *West Philadelphia Initiatives: A Case Study in Urban Revitalization* (2004). Dr. Kerman has worked as a consultant on projects involving community revitalization and in particular the role of anchor institutions in supporting neighborhood redevelopment, housing development and education reform and improvement. She earned a Ph.D. in history from the University of California, Berkeley, and a Business Certificate from the Wharton School at Penn.

Sheilah McLean Louis, is Staff Attorney and Director of Diversity Affairs for Philadelphia City Council. Her duties include analyzing and drafting legislation on diversity, economic opportunity and other inclusionary efforts of interest to the legislative branch. She has served in this position, in the Technical Services Division of the Office of the Council President, since transitioning from her position of Chief Legislative Aide for Councilwoman and Majority Leader Marion Tasco (Ninth District). In addition to participating in many of the equal opportunity oversight committees on projects city-wide, her government service extends to constituent-level meetings involving environmental policy and practices. She has extensive professional experience in international affairs and U.S. foreign policy with a portfolio that includes both legal and non-legal work in energy and natural resources, immigration, trade and workforce development.

Samantha A. Mirkin was a Greater Philadelphia Chamber of Commerce Summer Research Intern in 2008. She is studying Real Estate and Business at Temple University Fox School of Business and will receive her Bachelor of Business Administration in May, 2009.

Andy Rachlin currently serves as the Deputy Chief of Staff to the Deputy Mayor for Planning and Economic Development for the City of Philadelphia. He previously served as Chief of Staff to the Executive Director of the Port Authority of New York and New Jersey, as well as a Policy Advisor to Mayor Cory Booker of Newark, NJ and a Program Associate at the Policy Research Institute, a public policy think tank at Princeton University. Andy holds a bachelors in politics from Princeton and a masters in international security from St. Andrews University in Scotland.

IX. APPENDICES: MAPS, CHARTS, GRAPHS, AND TABLES

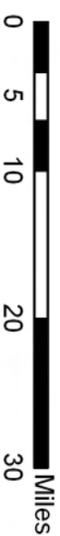
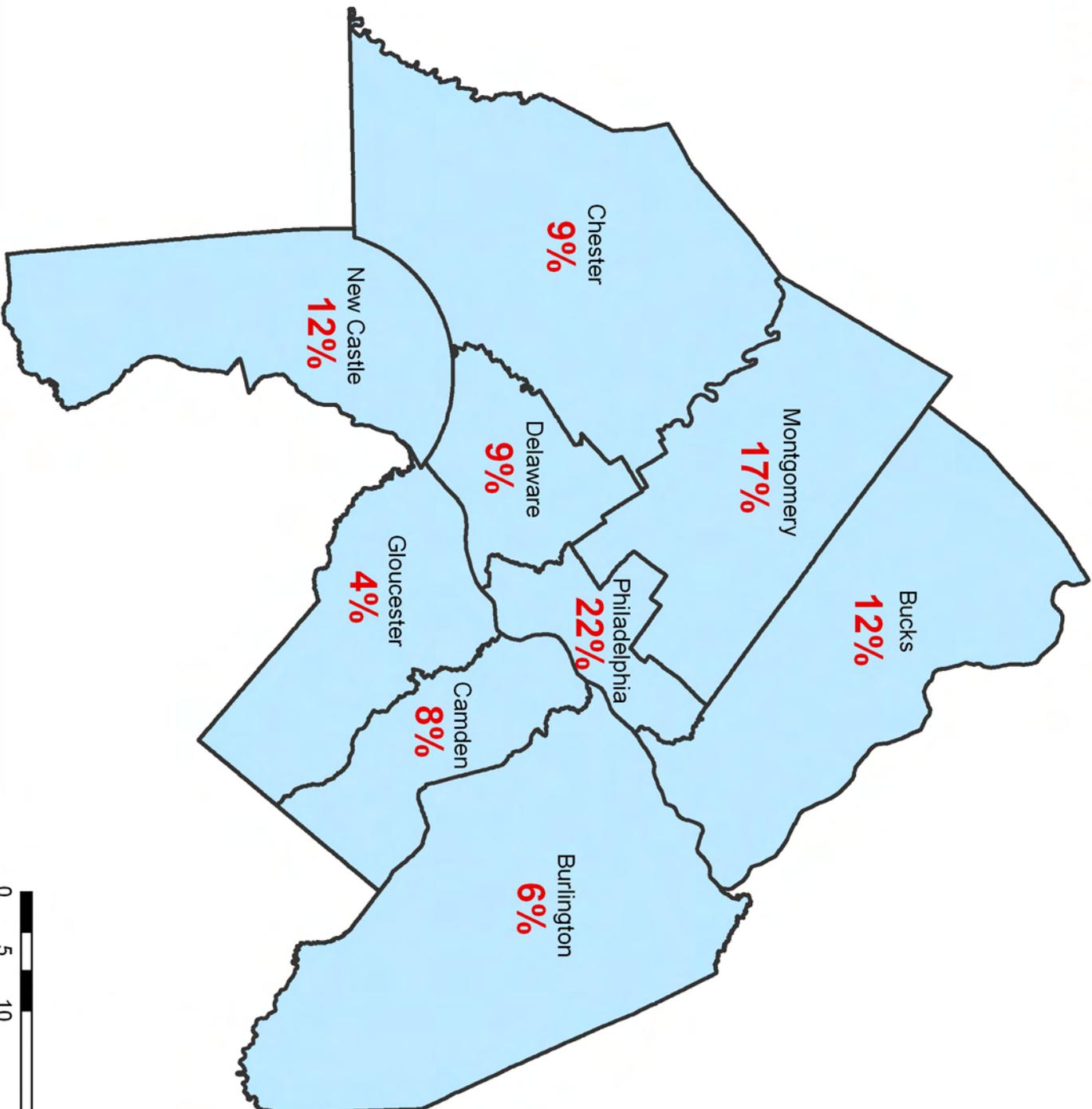
APPENDIX 1

Percentage of 9-County Construction Workforce by Work Location

Appendix 1

Percentage of 9-County Construction Workforce by Work Location

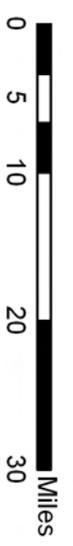
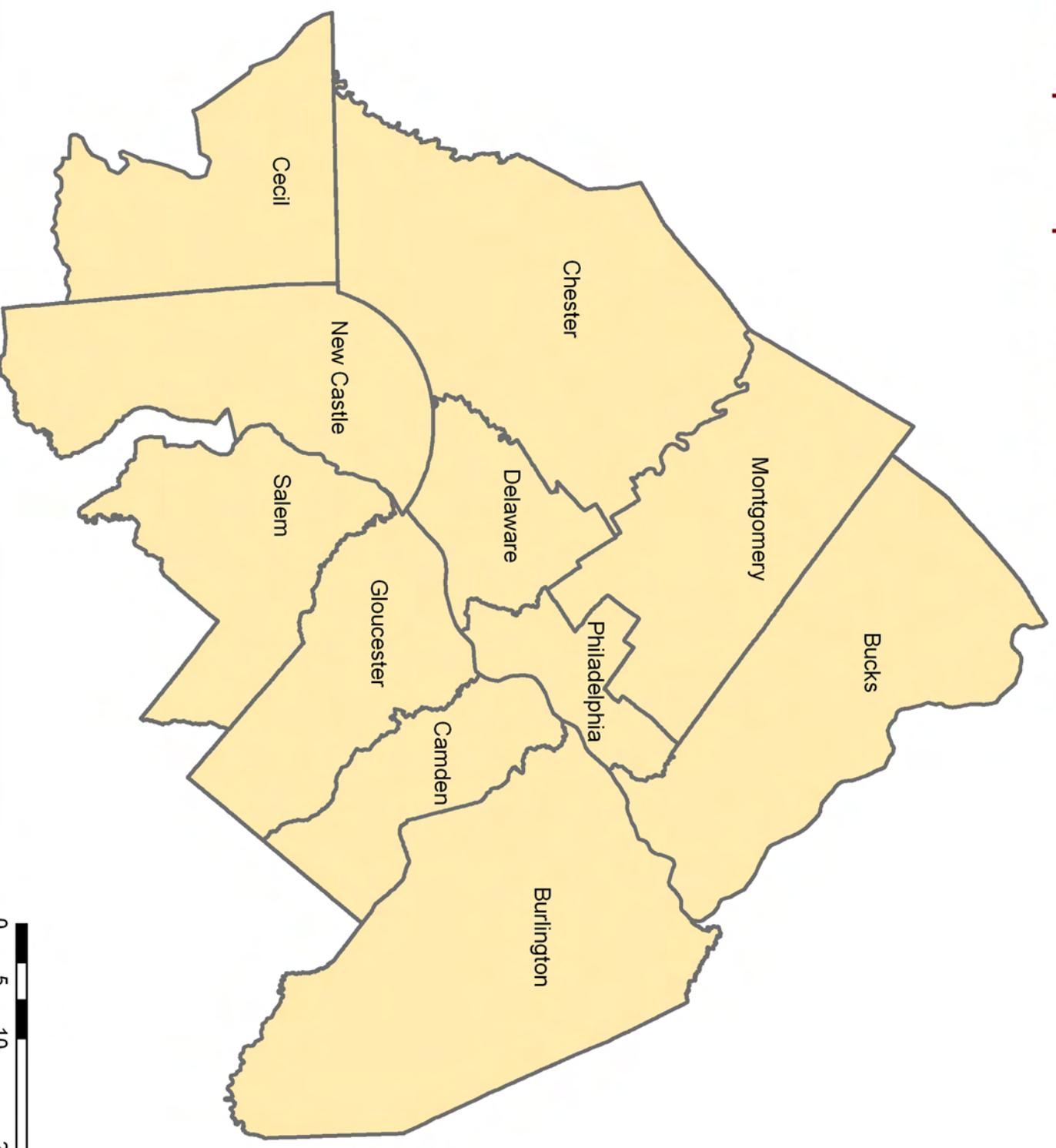
Percentage of 9-County Construction Workforce by Work Location



Appendix 2

11-County Philadelphia Metropolitan Statistical Area

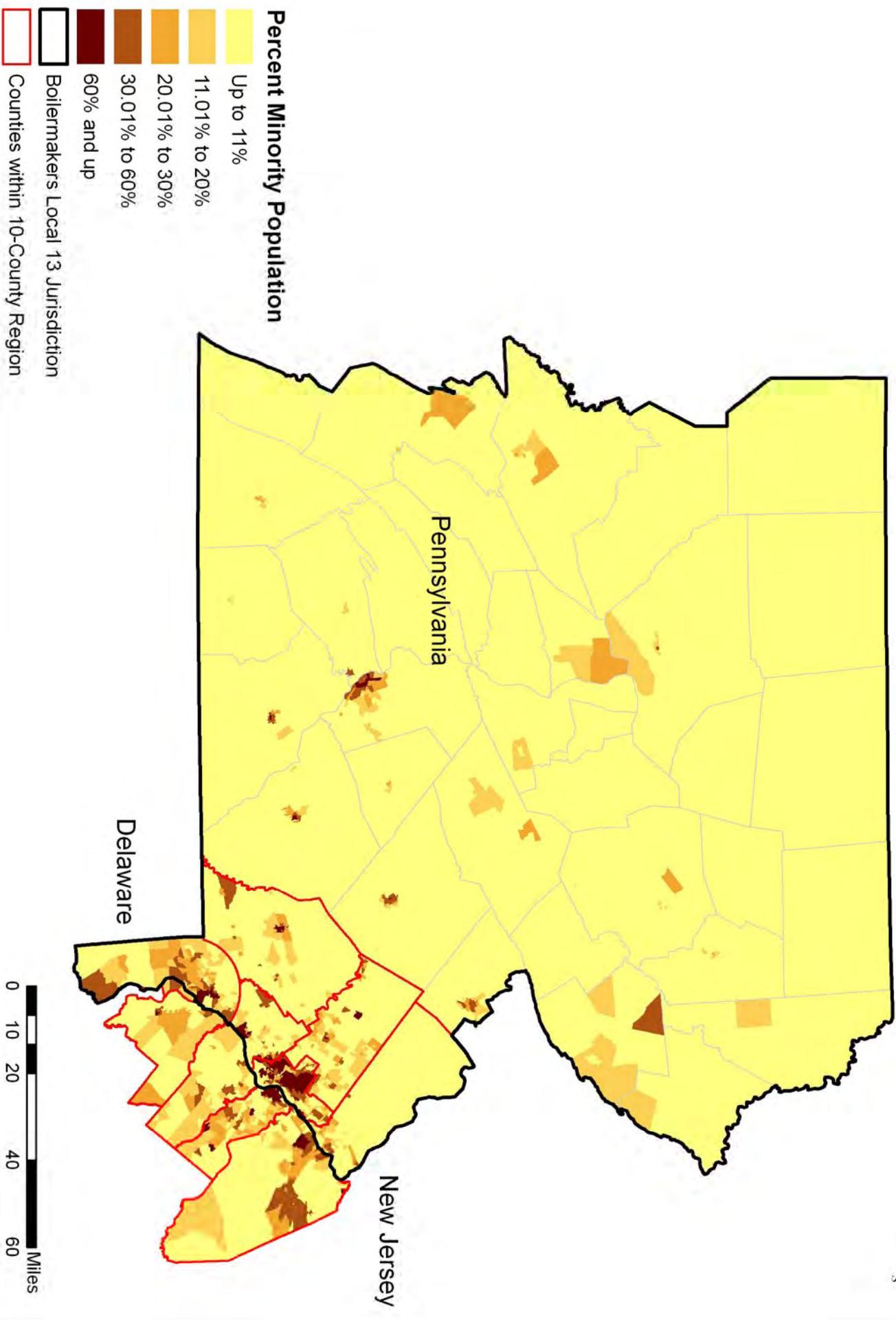
11-County Philadelphia Metropolitan Statistical Area



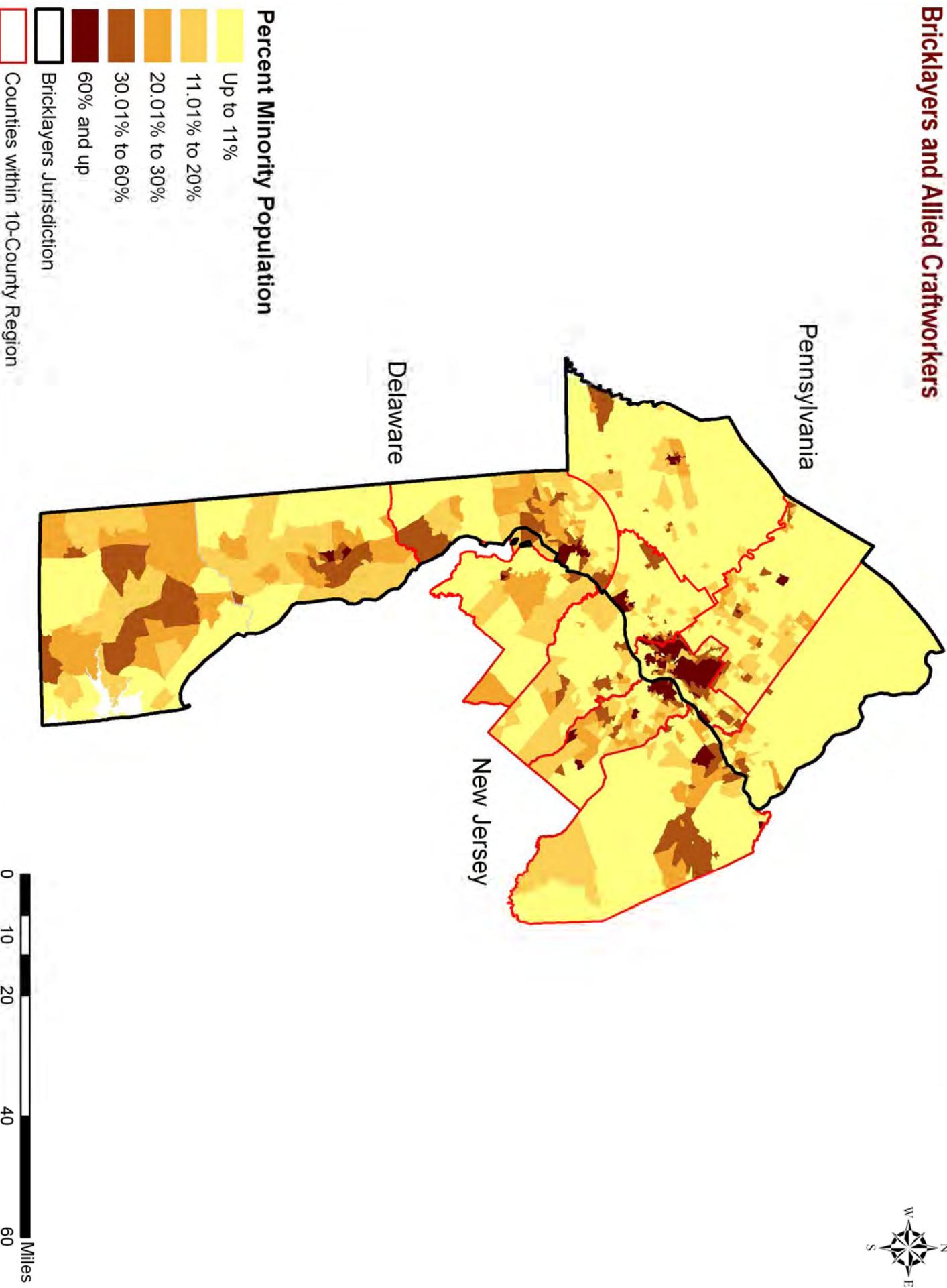
Appendix 3

Local Union Jurisdictional Maps

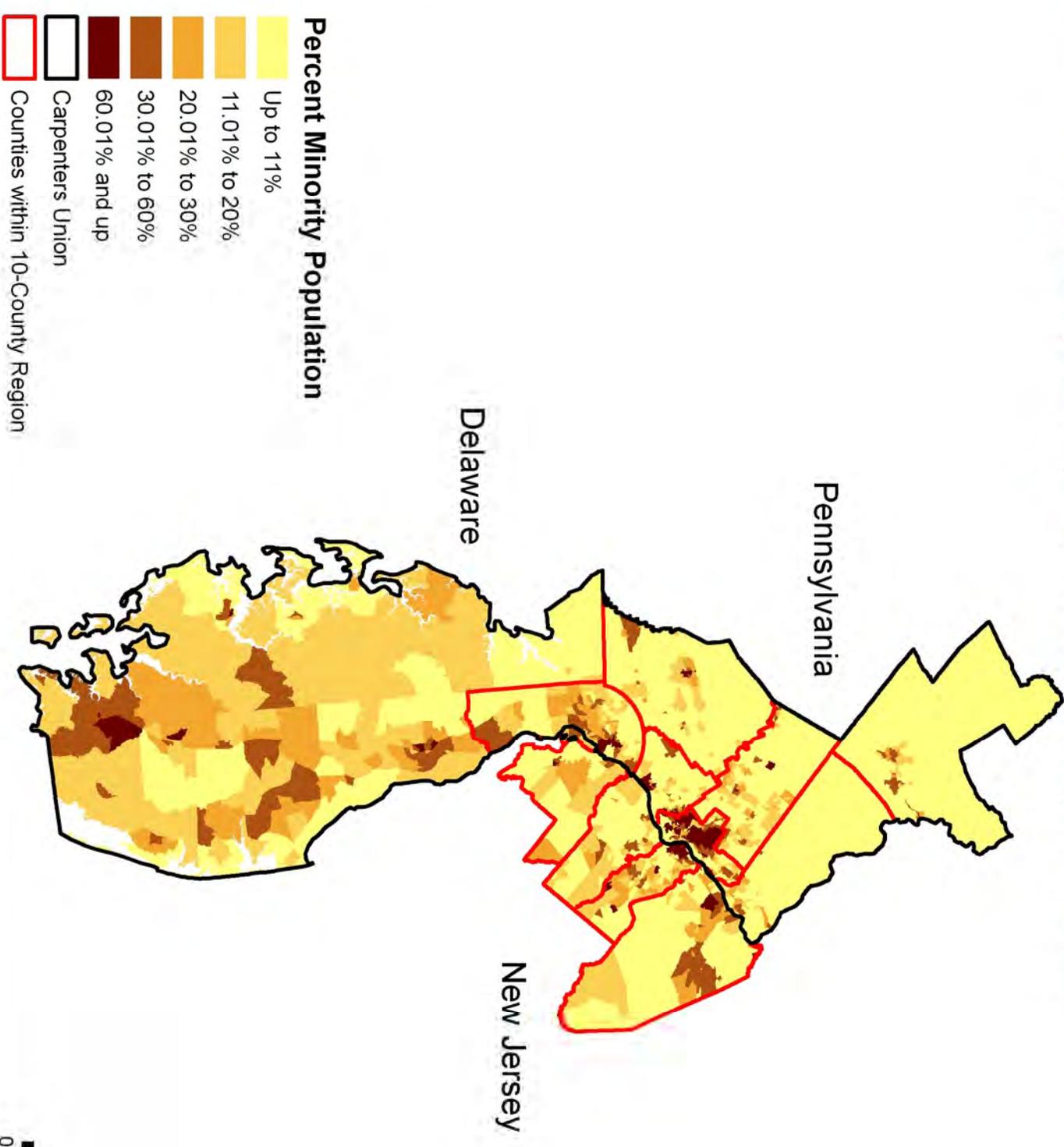
Boilermakers Local 13



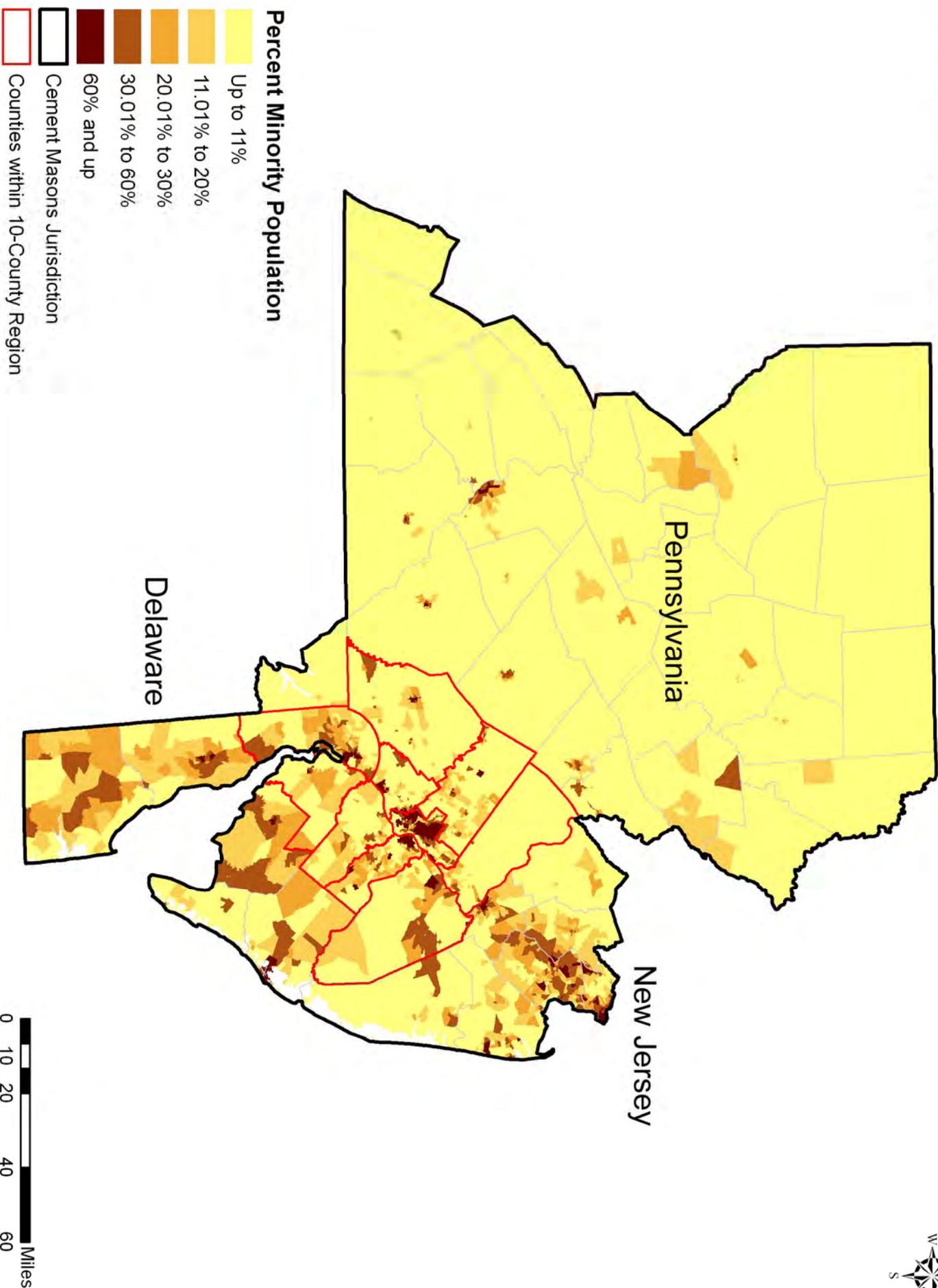
Bricklayers and Allied Craftworkers



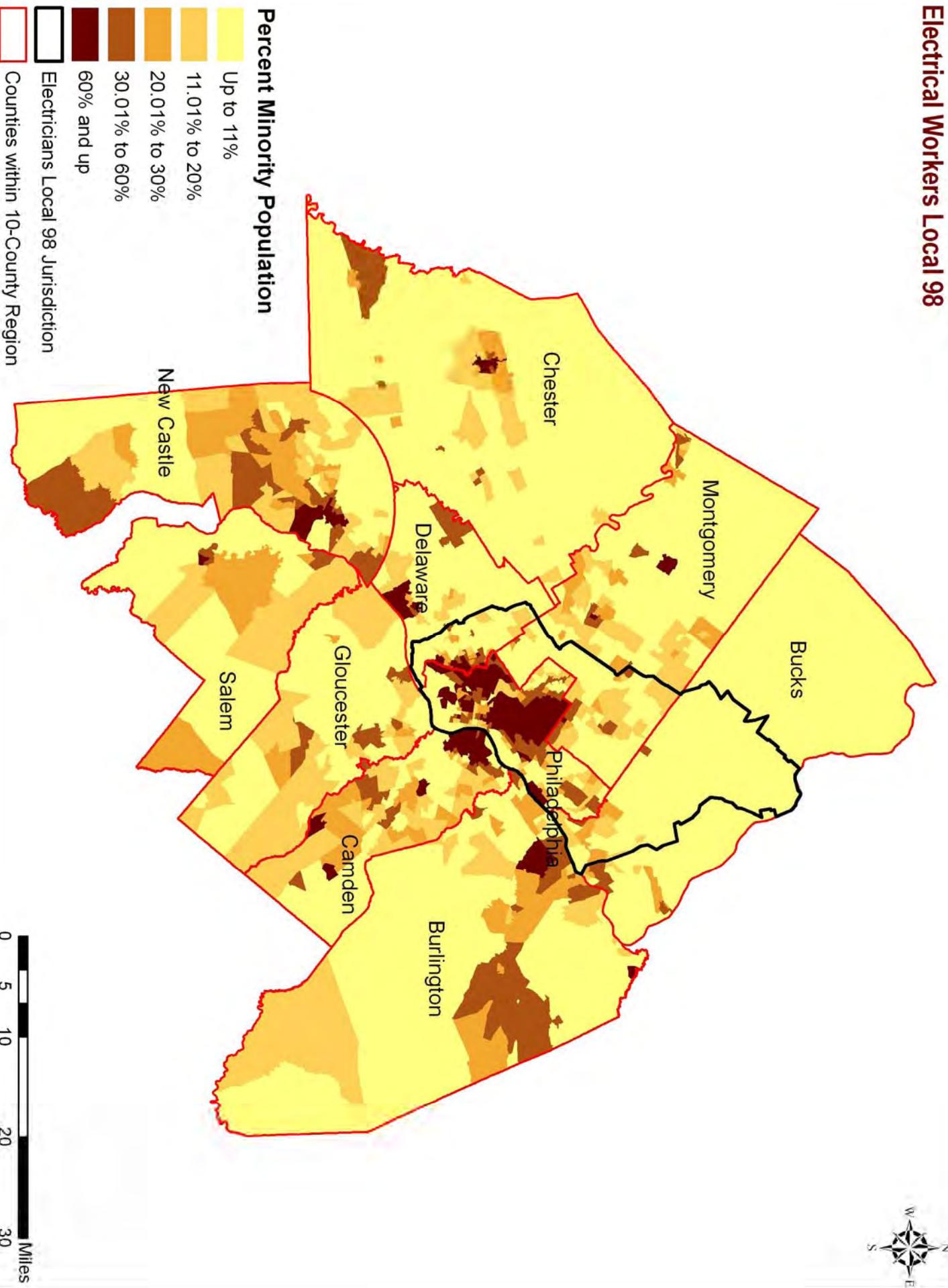
Carpenters Union - Metropolitan Regional Council of Philadelphia and Vicinity



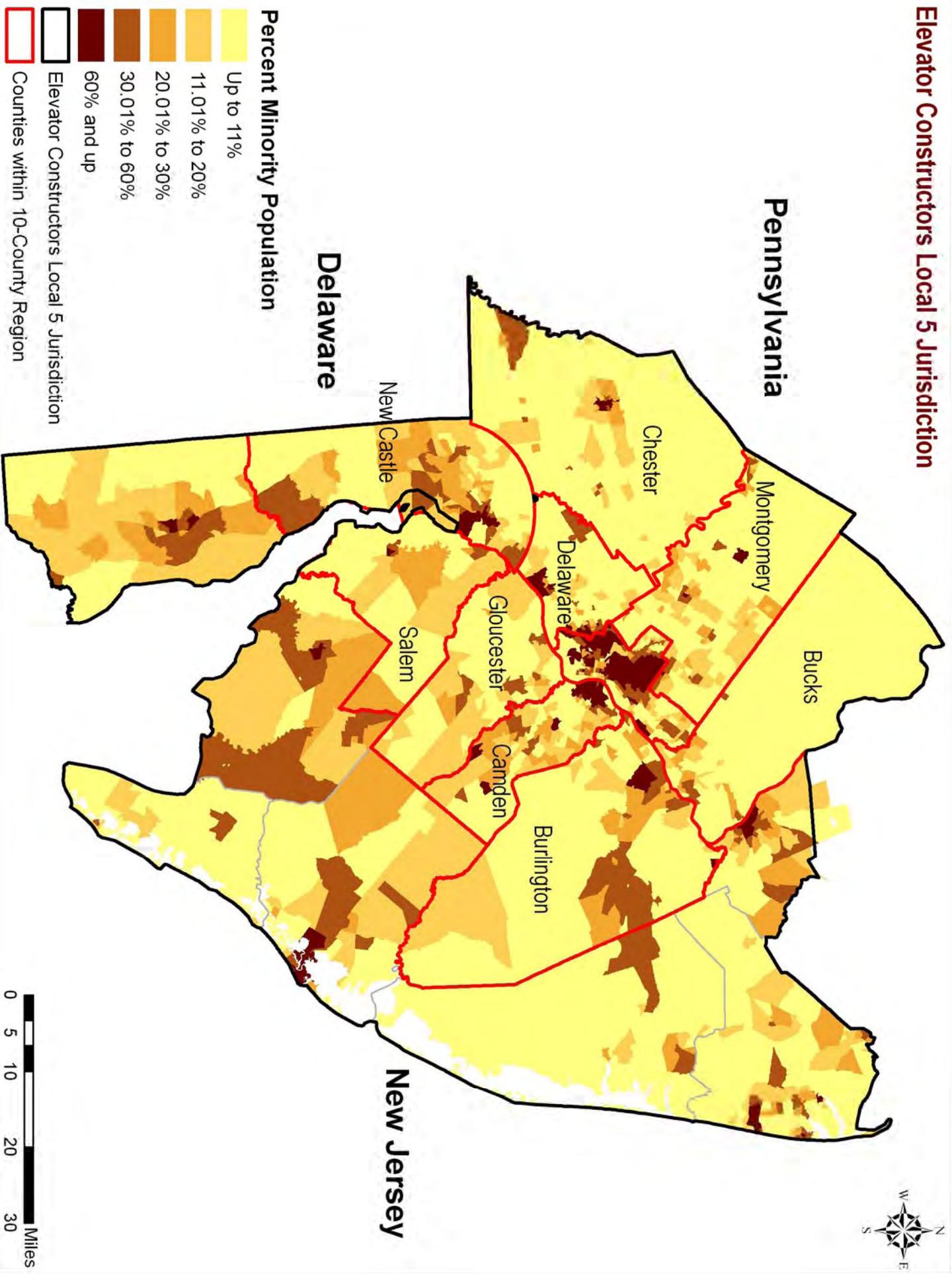
Cement Masons Local 592



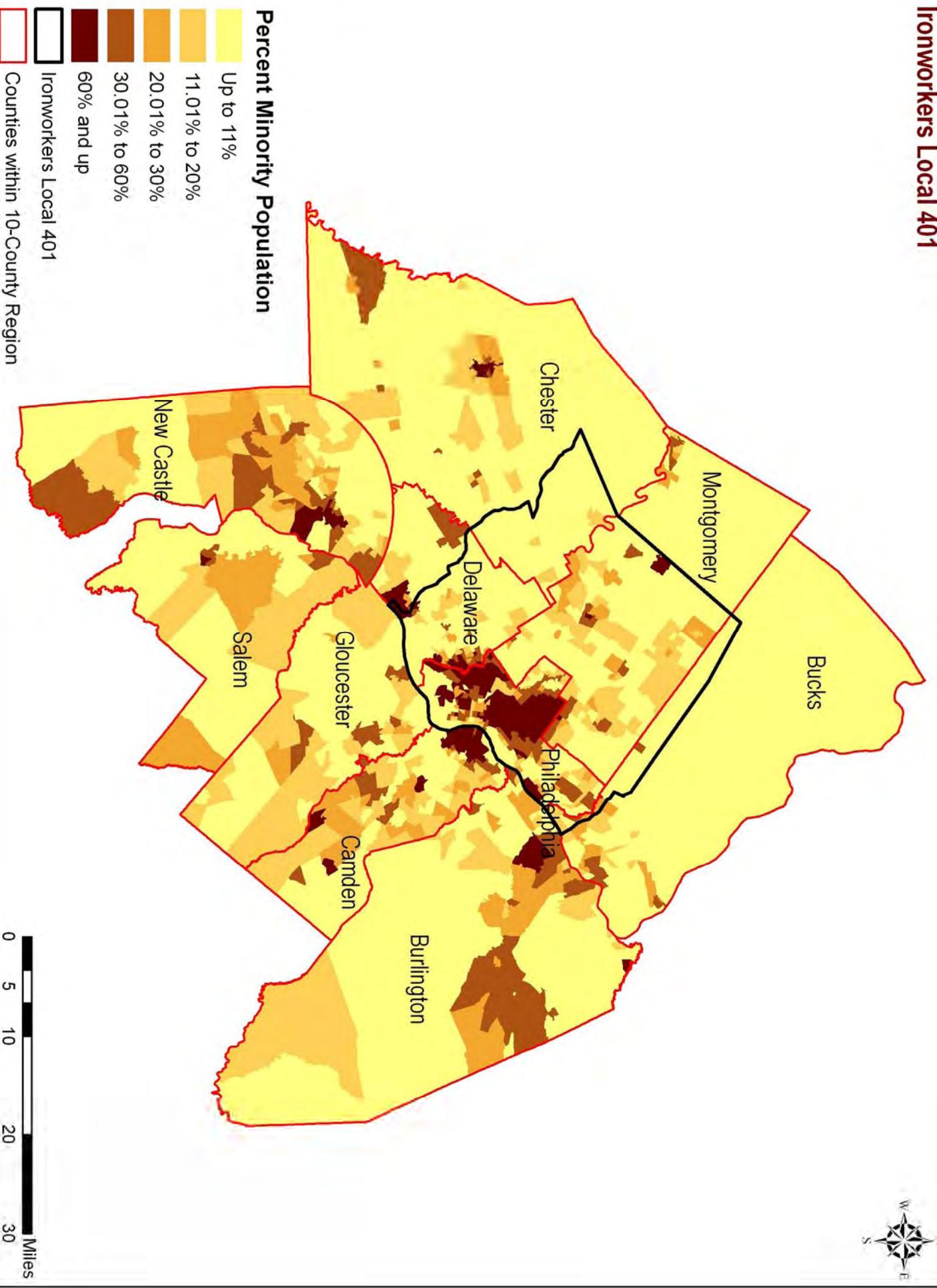
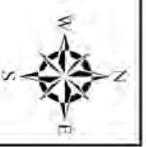
Electrical Workers Local 98



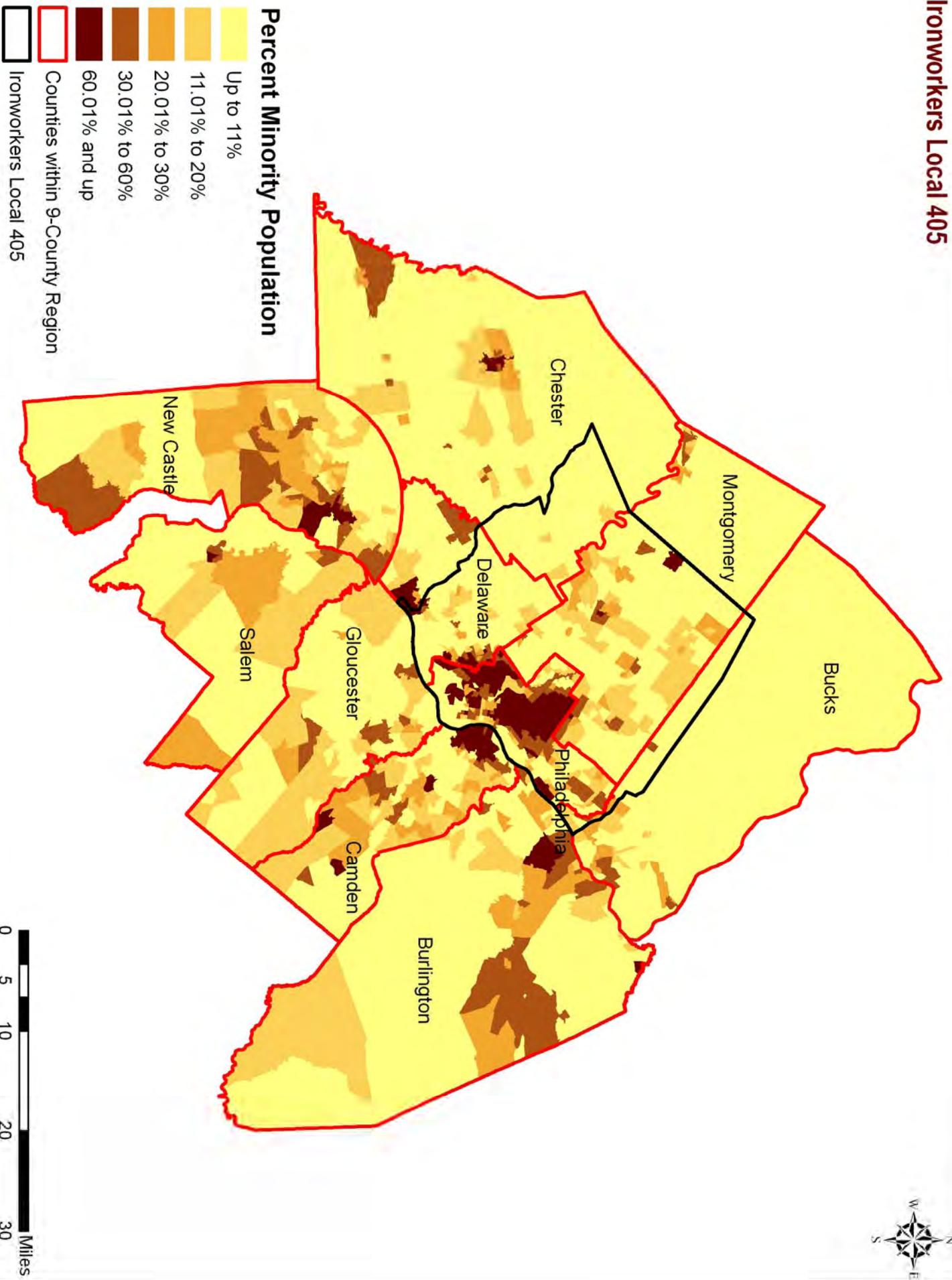
Elevator Constructors Local 5 Jurisdiction



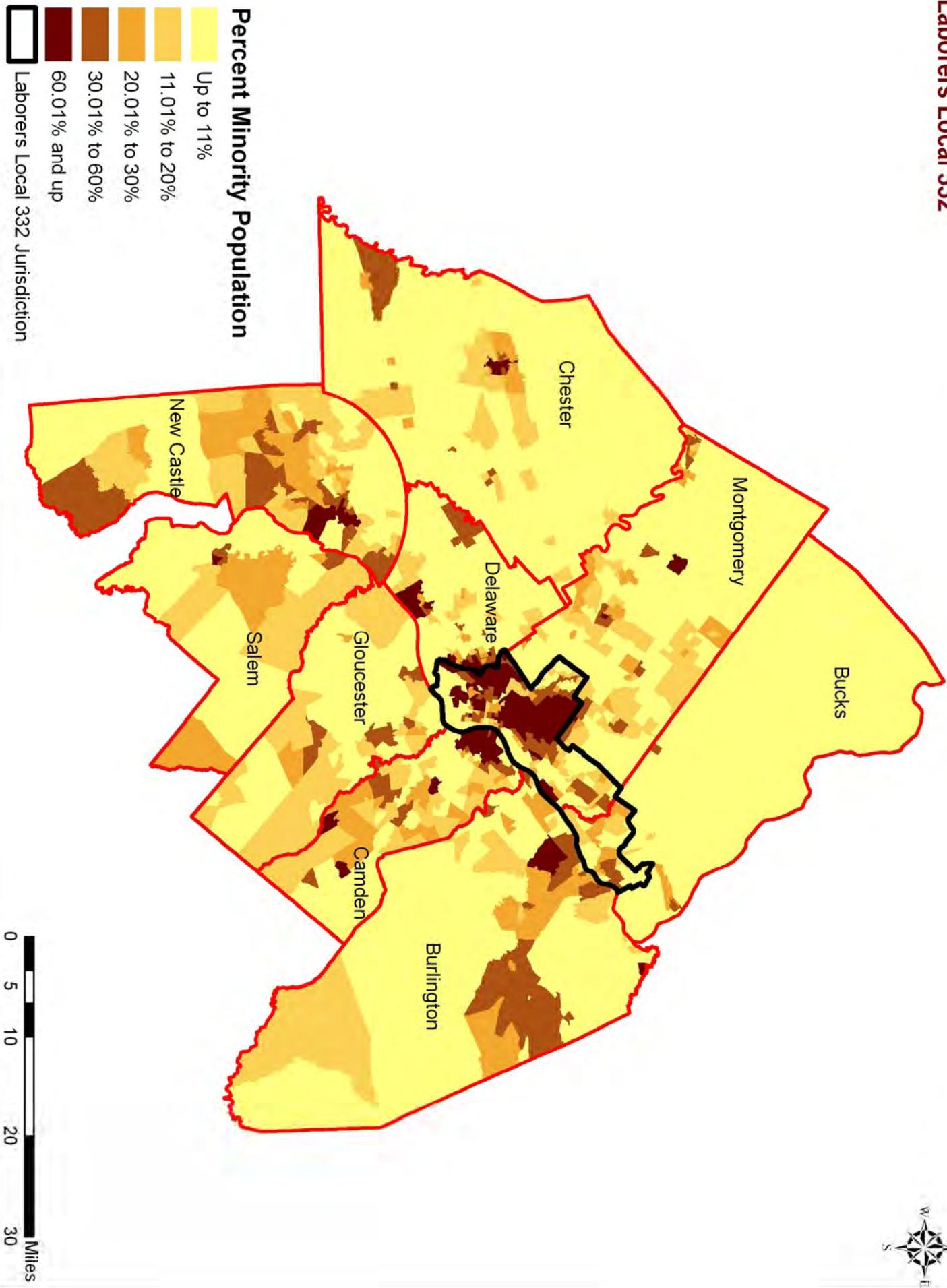
Ironworkers Local 401



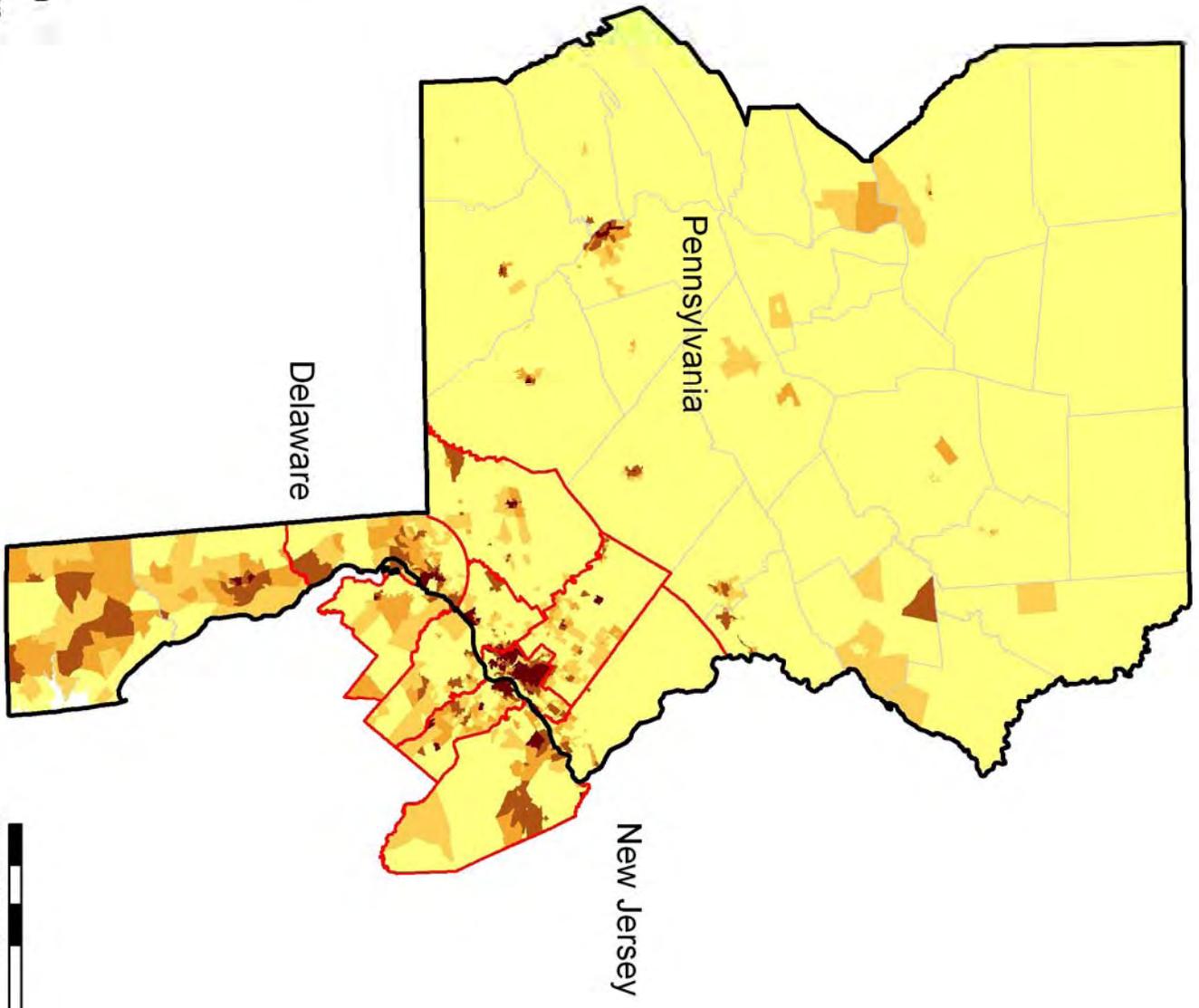
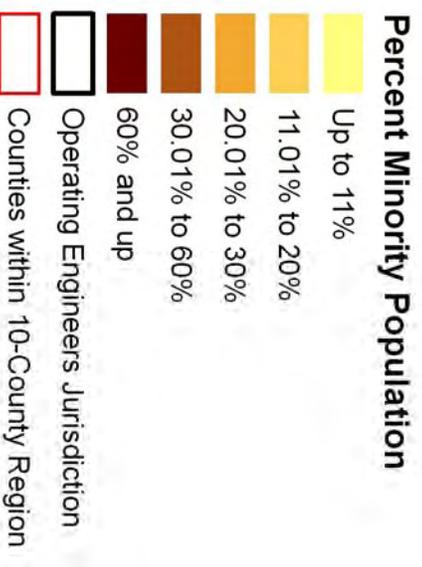
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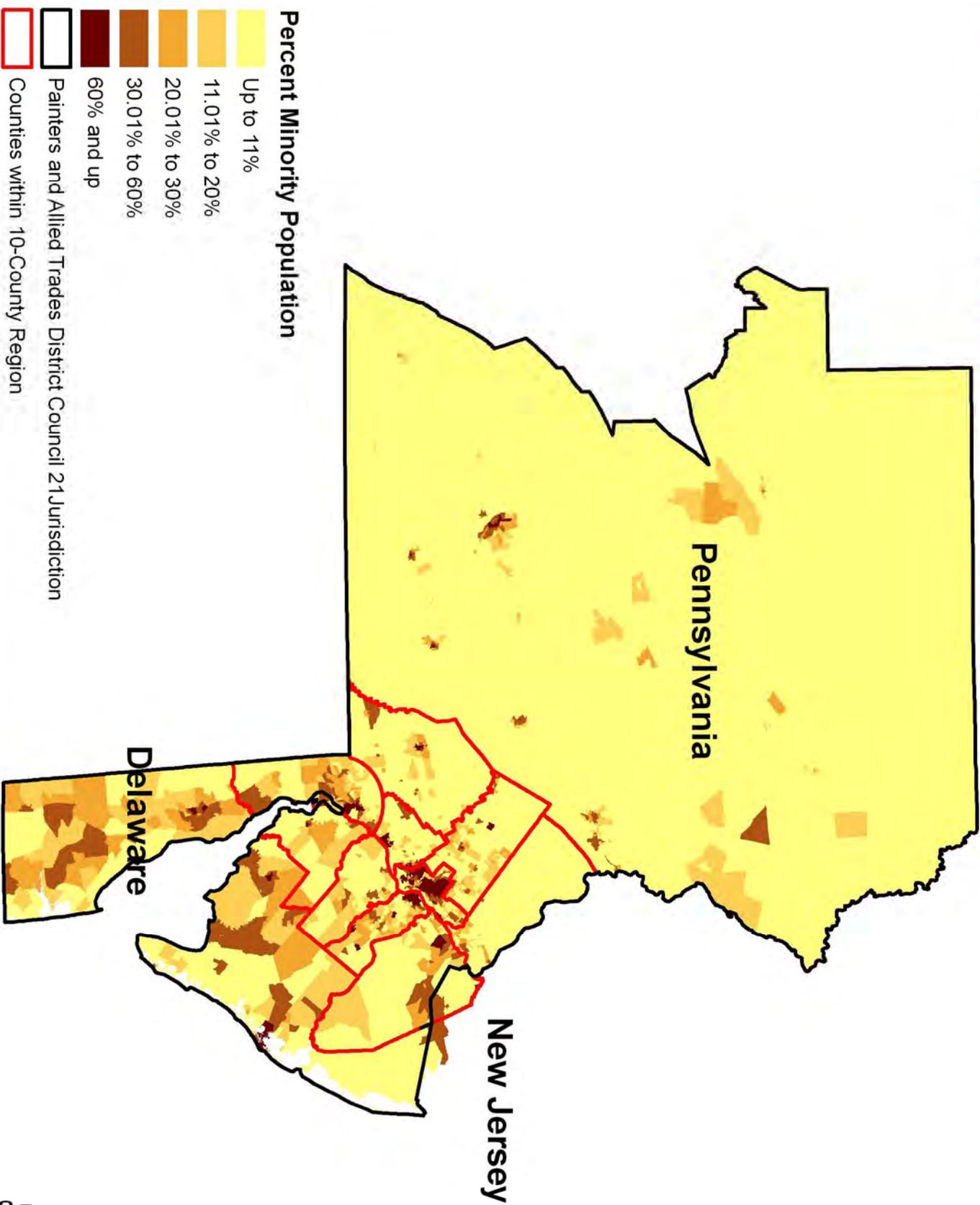
Laborsers Local 332



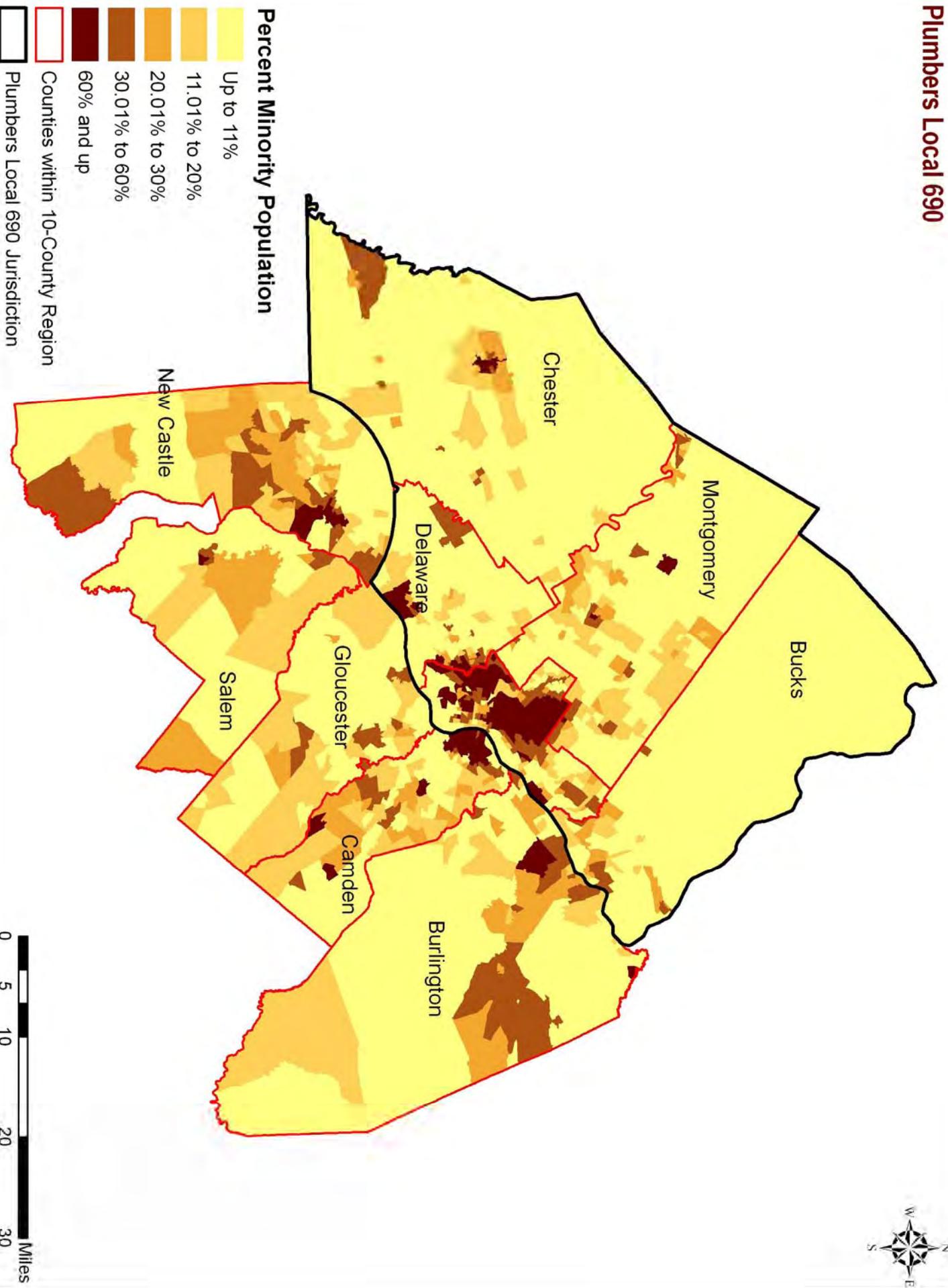
Operating Engineers Local 542



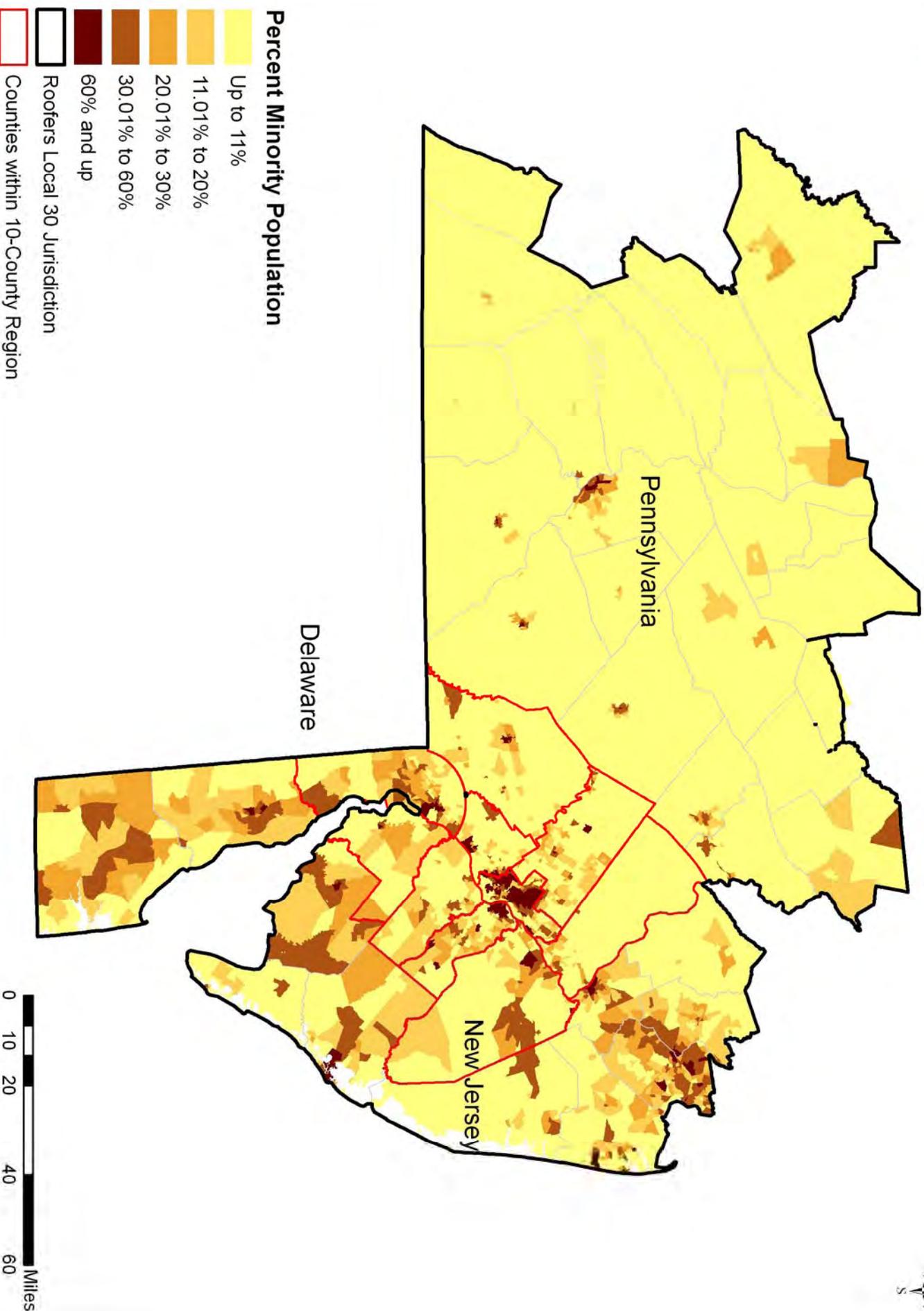
Painters and Allied Trades District Council 21



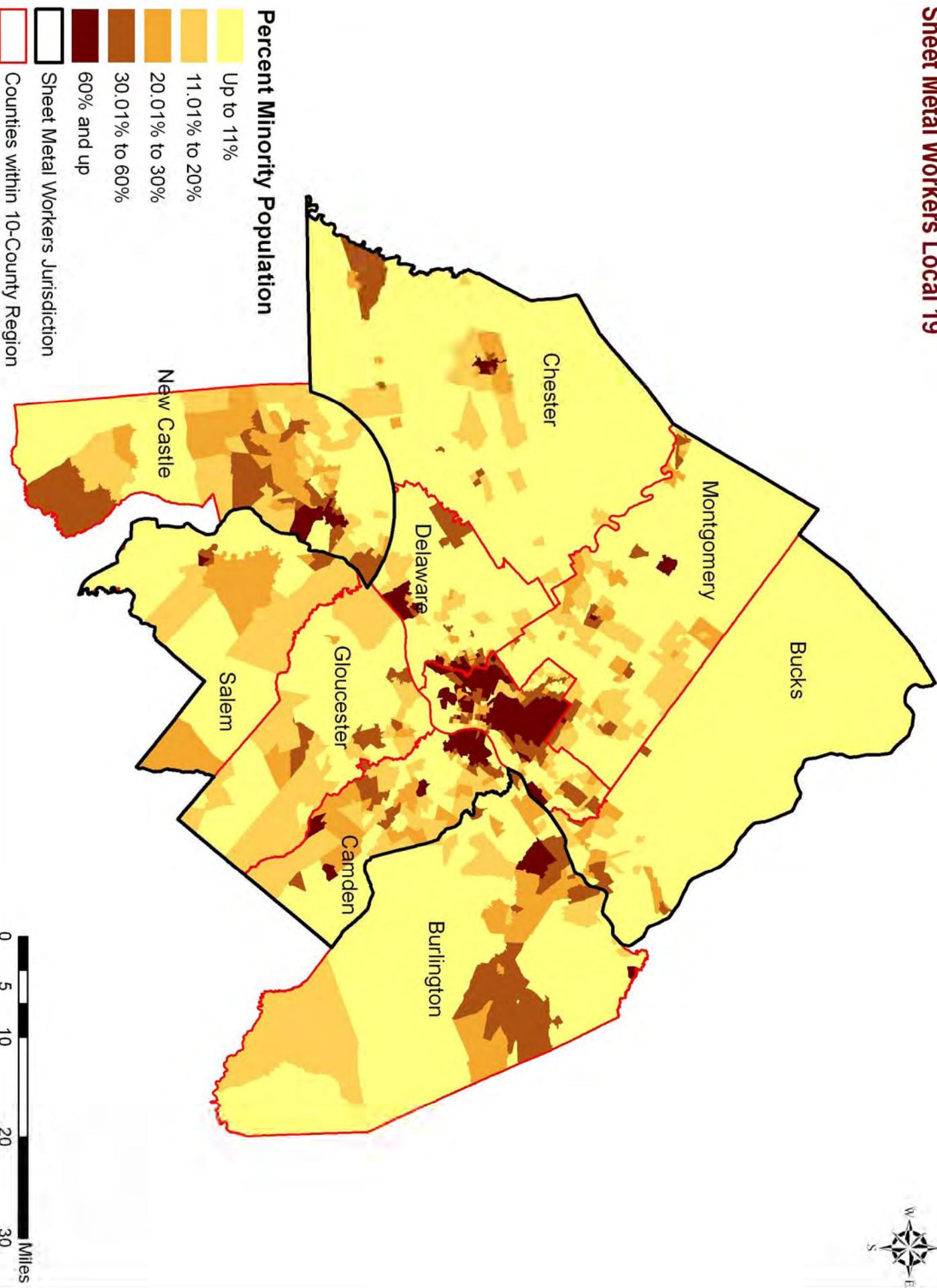
Plumbers Local 690



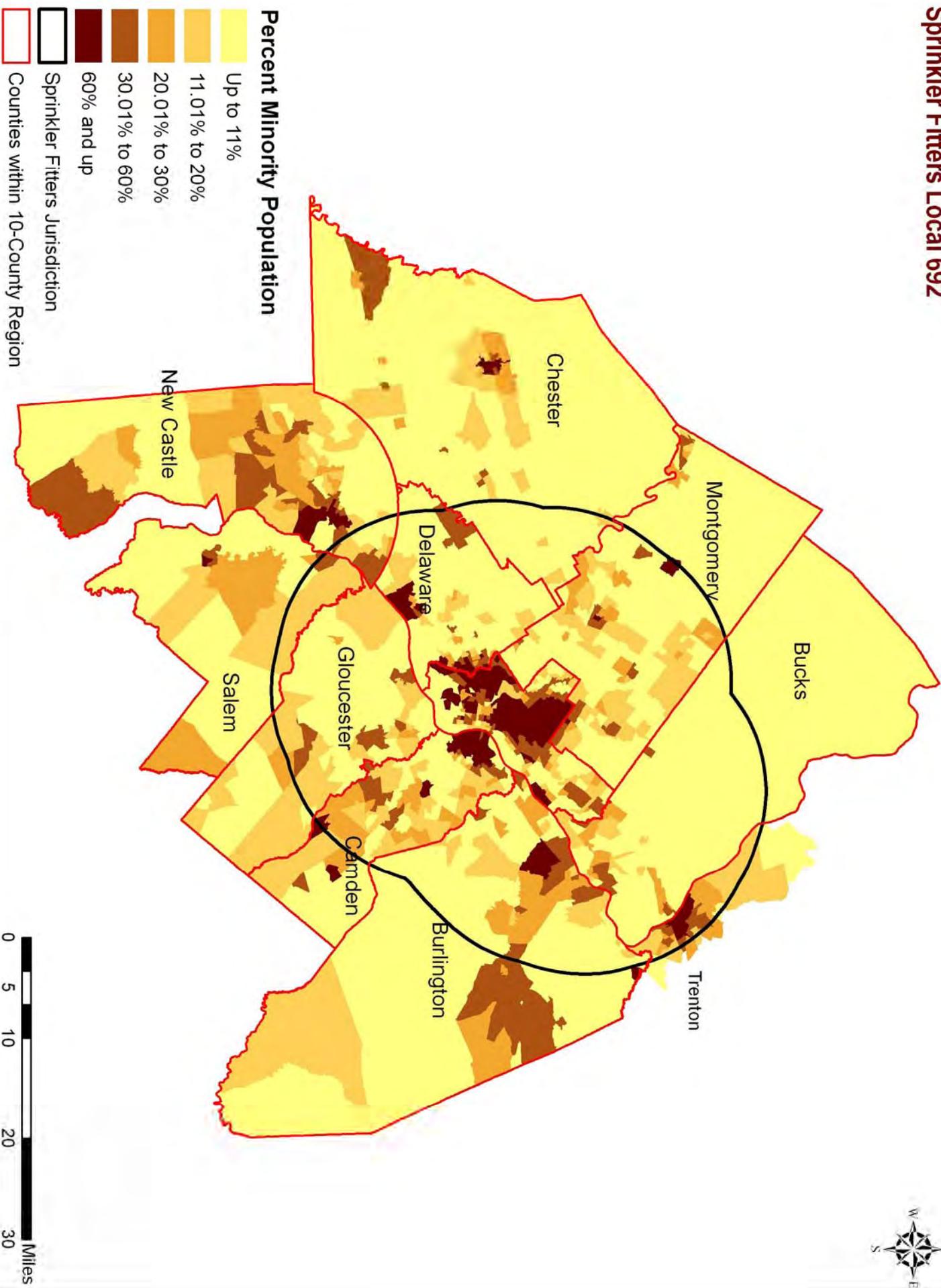
Roofers Local 30



Sheet Metal Workers Local 19



Sprinkler Fitters Local 692



APPENDIX 4 PHILADELPHIA BUILDING TRADES MEMBERSHIP DATA¹

| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|----------------------------------|------------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| Boilermakers #13 | DATA NOT PROVIDED | | | | | | | |
| Bricklayers and Allied #1 | Journeypersons | 2674 | 518 | 3 | 349 | 165 | 4 | NR |
| | | 100% | 19% | 0% | 13% | 6% | 0% | NR |
| Carpenters | DATA NOT PROVIDED | | | | | | | |
| Cement Masons #592 | Journeypersons | 681 | 170 | 3 | 133 | 37 | 0 | NR |
| | | 100% | 25% | 0% | 20% | 5% | 0% | NR |
| Electricians #98 | DATA NOT PROVIDED | | | | | | | |
| Elevator Constructors #5 | Journeypersons & Apprentices | 856 | 37 | 8 | 24 | 10 | 2 | 1 |
| | | 100% | 4% | 1% | 3% | 1% | 0% | 0% |
| Insulators and Allied #14 | Journeypersons | 340 | 15 | 3 | 11 | 4 | 0 | NR |
| | | 100% | 4% | 1% | 3% | 1% | 0% | NR |
| Ironworkers #401 | Journeypersons | 651 | 117 | 0 | 72 | 13 | 2 | 30 |
| | | 100% | 18% | 0% | 11% | 2% | 0% | 5% |
| Ironworkers #405 | DATA NOT PROVIDED | | | | | | | |

APPENDIX 4

PHILADELPHIA BUILDING TRADES MEMBERSHIP DATA¹

| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|---|------------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| Laborers #332³ | All | 2759 | 2302 | 210 | 1821 | 422 | 7 | 52 |
| | | 100% | 83% | 8% | 66% | 15% | 0% | 2% |
| Operating Engineers #542² | Journeypersons | 1703 | 363 | 42 | NR | NR | NR | NR |
| | | 100% | 21% | 2% | NR | NR | NR | NR |
| Painters and Allied #21 | Journeypersons | 5060 | 324 | 26 | 88 | 233 | 3 | NR |
| | | 100% | 6% | 1% | 2% | 5% | 0% | NR |
| Plumbers #690 | Journeypersons & Apprentices | 1937 | 98 | 5 | 83 | 10 | 5 | NR |
| | | 100% | 5% | 0% | 4% | 1% | 0% | NR |
| Roofers | Journeypersons & Apprentices | 1144 | 453 | 14 | NR | NR | NR | NR |
| | | 100% | 40% | 1% | NR | NR | NR | NR |
| Sheet Metal Workers #19² | Journeypersons | 1072 | 123 | 19 | 71 | 48 | 4 | NR |
| | | 100% | 11% | 2% | 7% | 4% | 0% | NR |
| Sprinkler Fitters #692³ | Journeypersons | 379 | 17 | 0 | 12 | 2 | 2 | 1 |
| | | 100% | 4% | 0% | 3% | 1% | 1% | 0% |
| Steamfitters #420 | Journeypersons | 2835 | 71 | 14 | 53 | 14 | 4 | NR |
| | | 100% | 3% | 0% | 2% | 0% | 0% | NR |

¹ Source: Philadelphia Building and Construction Trades Council AFL-CIO Diversity Commitment and Plan, February 4, 2008

² Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties only

³ Data are for Philadelphia county members only.

APPENDIX 5
PHILADELPHIA BUILDING TRADES MEMBERSHIP DATA¹
COMPARED WITH 2000 U.S. CENSUS DATA²

| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|----------------------------------|--------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| Boilermakers #13 | DATA NOT PROVIDED | | | | | | | |
| | Footprint Pop. | 100% | 19% | 52% | 13% | 4% | 2% | 4% |
| Bricklayers and Allied #1 | Journey persons | 100% | 19% | 0% | 13% | 6% | 0% | NR |
| | Footprint Pop. | 100% | 29% | 52% | 21% | 5% | 3% | 4% |
| Carpenters | DATA NOT PROVIDED | | | | | | | |
| | Footprint Pop. | 100% | 26% | 52% | 19% | 5% | 3% | 4% |
| Cement Masons #592 | Journey persons | 100% | 25% | 0% | 20% | 5% | 0% | NR |
| | Footprint Pop. | 100% | 20% | 52% | 13% | 6% | 3% | 5% |
| Electricians #98 | DATA NOT PROVIDED | | | | | | | |
| | Footprint Pop. | 100% | 38% | 53% | 29% | 6% | 4% | 5% |
| Elevator Constructors #5 | Journey & App | 100% | 4% | 1% | 3% | 1% | 0% | 0% |
| | Footprint Pop. | 100% | 26% | 52% | 18% | 6% | 3% | 5% |
| Insulators and Allied #14 | Journey persons | 100% | 4% | 1% | 3% | 1% | 0% | NR |
| | Footprint Pop. | 100% | NA | | | | | |
| Ironworkers #401 | Journey persons | 100% | 18% | 0% | 11% | 2% | 0% | 5% |
| | Footprint Pop. | 100% | 28% | 52% | 20% | 5% | 3% | 4% |

APPENDIX 5
PHILADELPHIA BUILDING TRADES MEMBERSHIP DATA¹
COMPARED WITH 2000 U.S. CENSUS DATA²

| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|---|--------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| Ironworkers #405 | DATA NOT PROVIDED | | | | | | | |
| | Footprint Pop. | 100% | NA | NA | NA | NA | NA | NA |
| Laborers #332³ | All | 100% | 83% | 8% | 66% | 15% | 0% | 2% |
| | Footprint Pop. | 100% | 55% | 54% | 43% | 8% | 4% | 7% |
| Operating Engineers #542³ | Journeypersons | 100% | 21% | 2% | NR | NR | NR | NR |
| | Footprint Pop. | 100% | 30% | 52% | 22% | 5% | 4% | 4% |
| Painters and Allied #21 | Journeypersons | 100% | 6% | 1% | 2% | 5% | 0% | NR |
| | Footprint Pop. | 100% | 19% | 52% | 13% | 5% | 2% | 4% |
| Plumbers #690 | Journey & App | 100% | 5% | 0% | 4% | 1% | 0% | NR |
| | Footprint Pop. | 100% | 30% | 52% | 22% | 5% | 4% | 4% |
| Roofers | Journey & App | 100% | 40% | 1% | NR | NR | NR | NR |
| | Footprint Pop. | 100% | 21% | 52% | 13% | 6% | 3% | 5% |
| Sheet Metal Workers #19³ | Journeypersons | 100% | 11% | 2% | 7% | 4% | 0% | NR |
| | Footprint Pop. | 100% | 30% | 52% | 22% | 5% | 4% | 4% |
| Sprinkler Fitters #692⁴ | Journeypersons | 100% | 4% | 0% | 3% | 1% | 1% | 0% |
| | Footprint Pop. | 100% | 55% | 54% | 43% | 8% | 4% | 7% |
| Steamfitters #420 | Journeypersons | 100% | 3% | 0% | 2% | 0% | 0% | NR |
| | Footprint Pop. | 100% | 26% | 52% | 18% | 6% | 3% | 5% |

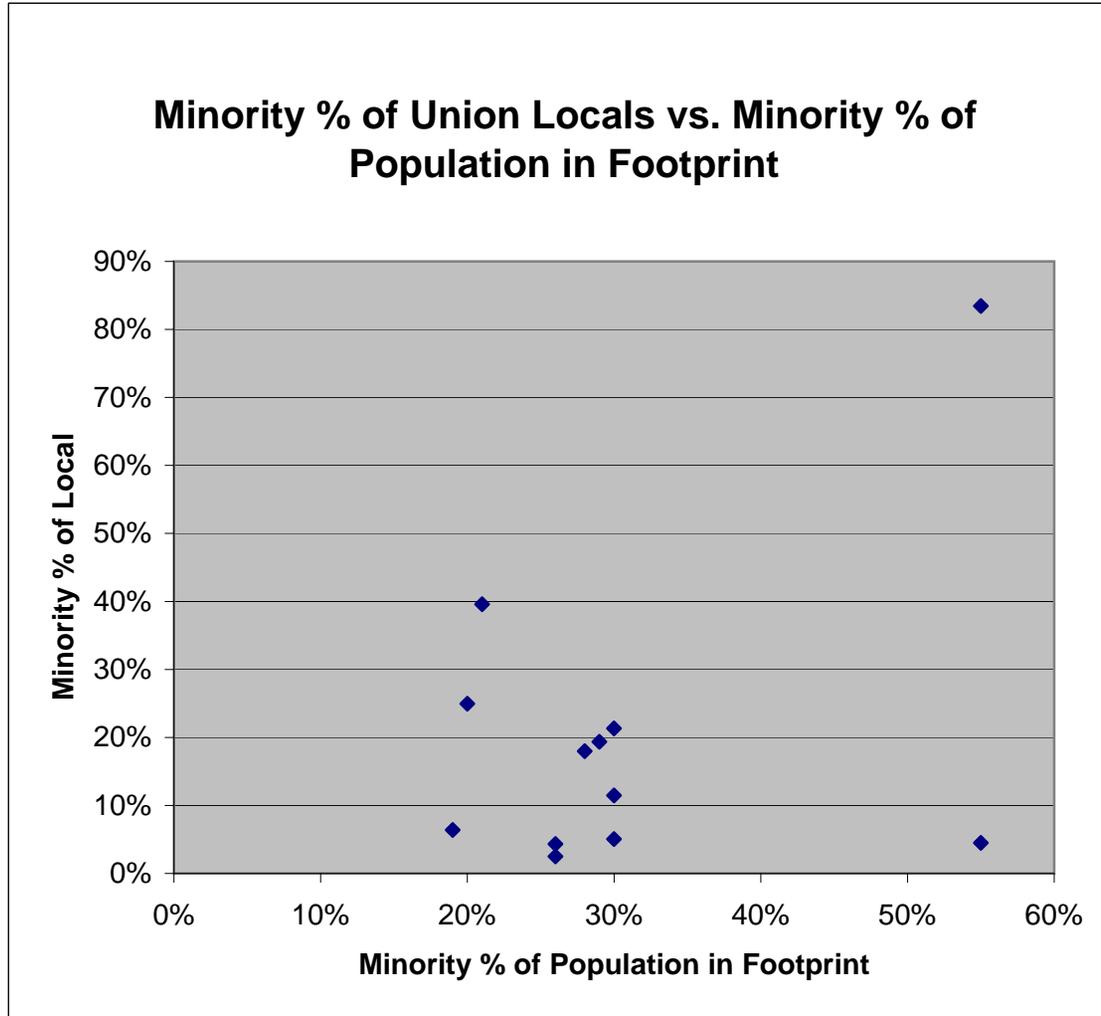
¹ Source: Philadelphia Building and Construction Trades Council AFL-CIO Diversity Commitment and Plan, February 4, 2008

² Source: Econsult Corpartaion tabulation of 2000 U.S. Census data on race and ethnicity of population in union's footprint

³ Both union data and "footprint" data are for Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties only.

⁴ Both union data and "footprint" data are for Philadelphia county members only.

Appendix 6



APPENDIX 7

DATA FOR CONSTRUCTION OCCUPATIONS FROM 2000 U.S. CENSUS

| | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|--|------|----------------|-------|------------------|-------------------|----------------|-------|
| Boilermakers (SOC 47-2011) | | | | | | | |
| 9-County per 2000 Census | 100% | 18% | 0% | 18% | 0% | 0% | 0% |
| Brickmasons, Blockmasons, and Stonemasons (SOC 47-2020) | | | | | | | |
| 9-County per 2000 Census | 100% | 17% | 0% | 5% | 2% | 0% | 11% |
| Carpenters (623) SOC 47-2031 | | | | | | | |
| 9-County per 2000 Census | 100% | 13% | 1% | 7% | 4% | 1% | 1% |
| Cement Masons, Concrete Finishers, and Terrazzo Workers (625) SOC 47-2050 | | | | | | | |
| 9-County per 2000 Census | 100% | 28% | 0% | 13% | 9% | 2% | 4% |
| Construction Laborers (626) SOC 47-2061 | | | | | | | |
| 9-County per 2000 Census | 100% | 30% | 3% | 18% | 9% | 1% | 2% |
| Drywall Installers, Ceiling Tile Installers, and Tapers (633) SOC 47-2080 | | | | | | | |
| 9-County per 2000 Census | 100% | 24% | 1% | 6% | 13% | 0% | 5% |
| Electricians SOC 47-2111 | | | | | | | |
| 9-County per 2000 Census | 100% | 9% | 1% | 7% | 1% | 0% | 1% |
| Elevator Installers and Repairers (670) SOC 47-4021 | | | | | | | |
| 9-County per 2000 Census | 100% | 1% | 4% | 1% | 0% | 0% | 0% |
| Insulation Workers (640) SOC 47-2130 | | | | | | | |
| 9-County per 2000 Census | 100% | 10% | 0% | 5% | 5% | 0% | 0% |
| Iron and Steel Workers (653) SOC 47-2XXX | | | | | | | |
| 9-County per 2000 Census | 100% | 5% | 0% | 3% | 2% | 0% | 0% |

APPENDIX 7

DATA FOR CONSTRUCTION OCCUPATIONS FROM 2000 U.S. CENSUS

| | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|---|------|----------------|-------|------------------|-------------------|----------------|-------|
| Miscellaneous Construction Equipment Operators (632) SOC 47-207X | | | | | | | |
| 9-County per 2000 Census | 100% | 11% | 2% | 6% | 3% | 0% | 1% |
| Painters, Construction and Maintenance (642) SOC 47-2141 | | | | | | | |
| 9-County per 2000 Census | 100% | 19% | 4% | 9% | 8% | 1% | 2% |
| Paperhangers (643) SOC 47-2142 | | | | | | | |
| 9-County per 2000 Census | 100% | 1% | 16% | 1% | 0% | 0% | 0% |
| Paving, Surfacing, and Tamping Equipment Operators (630) SOC 47-2071 | | | | | | | |
| 9-County per 2000 Census | 100% | 18% | 0% | 9% | 4% | 0% | 4% |
| Pipelayers, Plumbers, Pipefitters, and Steamfitters (SOC 47-2150) | | | | | | | |
| 9-County per 2000 Census | 100% | 7% | 1% | 5% | 1% | 0% | 1% |
| Plasterers and Stucco Masons (646) SOC 47-2161 | | | | | | | |
| 9-County per 2000 Census | 100% | 23% | 0% | 14% | 5% | 0% | 3% |
| Roofers (651) SOC 47-2181 | | | | | | | |
| 9-County per 2000 Census | 100% | 19% | 1% | 8% | 9% | 0% | 2% |
| Sheet Metal Workers (652) SOC 47-2211 | | | | | | | |
| 9-County per 2000 Census | 100% | 11% | 0% | 2% | 8% | 1% | 0% |

Source: Econsult Corporation tabulation of 2000 U.S. Census Data

APPENDIX 8

| PHILADELPHIA BUILDING TRADES APPRENTICE DATA ¹ | | | | | | | | |
|---|-------------------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
| Boilermakers #13 | DATA NOT PROVIDED | | | | | | | |
| Bricklayers and Allied #1 | Journeypersons | 2674 | 518 | 3 | 349 | 165 | 4 | NR |
| | | 100% | 19% | 0.1% | 13% | 6% | 0% | NR |
| | Apprentices | 203 | 51 | 0 | 22 | 27 | 1 | 1 |
| | | 100% | 25% | 0.0% | 11% | 13% | 0% | 0% |
| Carpenters | DATA NOT PROVIDED | | | | | | | |
| Cement Masons #592 | Journeypersons | 681 | 170 | 3 | 133 | 37 | 0 | NR |
| | | 100% | 25% | 0.4% | 20% | 5% | 0% | NR |
| | Apprentices | 44 | 19 | 1 | 16 | 3 | 0 | NR |
| | | 100% | 43% | 2.3% | 36% | 7% | 0% | NR |
| Electricians #98 | DATA NOT PROVIDED | | | | | | | |
| Elevator Constructors #5 | APPRENTICE DATA NOT PROVIDED | | | | | | | |
| Insulators and Allied #14 | Journeypersons | 340 | 15 | 3 | 11 | 4 | 0 | NR |
| | | 100% | 4% | 0.9% | 3% | 1% | 0% | NR |
| | Apprentices | 77 | 5 | 2 | 5 | 0 | 0 | NR |
| | | 100% | 6% | 2.6% | 6% | 0% | 0% | NR |
| Ironworkers #401 | Journeypersons | 651 | 117 | 0 | 72 | 13 | 2 | 30 |
| | | 100% | 18% | 0.0% | 11% | 2% | 0% | 5% |
| | Apprentices | 153 | 36 | 0 | 24 | 6 | 0 | 6 |
| | | 100% | 24% | 0.0% | 16% | 4% | 0% | 4% |
| Ironworkers #405 | DATA NOT PROVIDED | | | | | | | |
| Laborers #332 | NO APPRENTICES | | | | | | | |
| Operating Engineers #542 | APPRENTICE DATA NOT PROVIDED | | | | | | | |

APPENDIX 8

| PHILADELPHIA BUILDING TRADES APPRENTICE DATA ¹ | | | | | | | | |
|---|-------------------------------------|------|----------------|-------|------------------|-------------------|----------------|-------|
| | | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
| Painters and Allied #21 | Journeypersons | 5060 | 324 | 26 | 88 | 233 | 3 | NR |
| | | 100% | 6% | 0.5% | 2% | 5% | 0% | NR |
| | Apprentices | 403 | 28 | 4 | 17 | 11 | 0 | NR |
| | | 100% | 7% | 1.0% | 4% | 3% | 0% | NR |
| Plumbers #690 | APPRENTICE DATA NOT PROVIDED | | | | | | | |
| Roofers | APPRENTICE DATA NOT PROVIDED | | | | | | | |
| Sheet Metal Workers #19² | Journeypersons | 1072 | 123 | 19 | 71 | 48 | 4 | NR |
| | | 100% | 11% | 1.8% | 7% | 4% | 0% | NR |
| | Apprentices | 107 | 22 | 1 | 18 | 3 | 1 | NR |
| | | 100% | 21% | 0.9% | 17% | 3% | 1% | NR |
| Sprinkler Fitters #692³ | Journeypersons | 379 | 17 | 0 | 12 | 2 | 2 | 1 |
| | | 100% | 4% | 0% | 3% | 1% | 1% | 0% |
| | Apprentices | 81 | 7 | 2 | 6 | 1 | 0 | 0 |
| | | 100% | 9% | 2.5% | 7% | 1% | 0% | 0% |
| Steamfitters #420 | Journeypersons | 2835 | 71 | 14 | 53 | 14 | 4 | NR |
| | | 100% | 3% | 0.5% | 2% | 0% | 0% | NR |
| | Apprentices | 377 | 30 | 4 | 21 | 7 | 2 | NR |
| | | 100% | 8% | 1.1% | 6% | 2% | 1% | NR |

¹ Source: Philadelphia Building and Construction Trades Council AFL-CIO Diversity Commitment and Plan, February 4, 2008

² Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties only

³ Data on minority & women are for Philadelphia county members only.

APPENDIX 9

Demographic Data on Labor Force Working in 9-County Area Ages 16-34 - Completed High School, GED, or Some College

| | AGE | ALL | All Minorities | Women | African American | Hispanic American | Asian American | Other |
|---------------------------------|-------|---------|----------------|------------|------------------|-------------------|----------------|--------|
| HS or GED | 16-19 | 29,680 | 10,290 | 14,580 | 6,870 | 1,922 | 807 | 691 |
| | | 100% | 35% | 49% | 23% | 6% | 3% | 2% |
| | 20-34 | 230,776 | 82,506 | 101,145 | 58,040 | 16,015 | 4,175 | 4,276 |
| | | 100% | 36% | 44% | 25% | 7% | 2% | 2% |
| | 16-34 | 260,456 | 92,796 | 115,725 | 64,910 | 17,937 | 4,982 | 4,967 |
| | | 100% | 36% | 44% | 25% | 7% | 2% | 2% |
| Some College | 16-19 | 31,127 | 8,342 | 18,318 | 4,730 | 1,294 | 1,507 | 811 |
| | | 100% | 27% | 59% | 15% | 4% | 5% | 3% |
| | 20-34 | 269,988 | 80,703 | 141,220 | 55,040 | 12,120 | 8,005 | 5,538 |
| | | 100% | 30% | 52% | 20% | 4% | 3% | 2% |
| | 16-34 | 301,115 | 89,045 | 159,538 | 59,770 | 13,414 | 9,512 | 6,349 |
| | | 100% | 30% | 53% | 20% | 4% | 3% | 2% |
| HS, GED, or Some College | 16-19 | 60,807 | 18,632 | 32,898 | 11,600 | 3,216 | 2,314 | 1,502 |
| | | 100% | 31% | 54% | 19% | 5% | 4% | 2% |
| | 20-34 | 500,764 | 163,209 | 242,365 | 113,080 | 28,135 | 12,180 | 9,814 |
| | | 100% | 33% | 48% | 23% | 6% | 2% | 2% |
| | 16-34 | 561,571 | 181,841 | 275,263 | 124,680 | 31,351 | 14,494 | 11,316 |
| | | 100% | 32% | 49% | 22% | 6% | 3% | 2% |

Appendix 10

Pre-Apprenticeship Programs

Pre-apprenticeships & Building Trade Schools in the Philadelphia Region

1. **Pennco Tech** - Bristol, PA
 - Air Conditioning (HVAC-R)
 - Electrician
 - Plumbing

2. **YTI Career Institute** – York, PA
 - Electrical Technician
 - Electronics Engineering Technology
 - Heating/ Air Conditioning and Refrigeration Technology

3. **North American Trade School** – Baltimore, MD
 - Building Construction Technician
 - Heating, Refrigeration and Air Conditioning Technician (HRVAC)

4. **Thompson Institute** – Philadelphia, PA
 - Electrician

5. **Orleans Technical Institute (part of JEVS)** – Philadelphia, PA
 - Air Conditioning, Refrigeration & Heating
 - Building Maintenance
 - Carpentry
 - Plumbing & Heating
 - Residential & Commercial Electricity

6. **Test College of Technology** – Baltimore, MD and Beltsville, MD
 - Electrician
 - Heating, Ventilation and Air Conditioning
 - Refrigeration, Heating and Air Conditioning

7. **Lincoln Technical Institute** – Allentown, PA and Philadelphia, PA
 - Electrician
 - Heating, Ventilation, Air Conditioning
 - Welding

8. **Chi Institute** – Broomall, PA and Franklin Mills, PA
 - Air Conditioning, Heating, and Refrigeration Technology
 - Electrician

9. **Penn Foster Career School** – distance learning
 - Carpentry
 - Electrician
 - Home Remodeling and Repair
 - Plumber
 - Landscaper

10. **All-State Career** – Essington, PA and Baltimore, MD
 - Heating, Ventilation, Air Conditioning and Refrigeration (HVAC-R)

11. **Youth Build Philadelphia Charter School**– Philadelphia, PA
 - Handling Materials and Tools
 - Demolition and Cleanout
 - Blueprint Reading
 - Cost Estimating
 - Replacement of Structural Members
 - Masonry
 - Framing
 - Floor Preparation/Finishing
 - Door/Window Installation
 - Insulation and Drywall
 - Interior finishing

12. **Mercy Vocational High School** – Philadelphia, PA
 - Finish Carpentry
 - Construction Carpentry
 - Residential and Commercial Electricity
 - Heating, Ventilation, Air Conditioning and Refrigeration (HVAC-R)

13. **Greater Philadelphia Urban Affairs Coalition** – Philadelphia, PA
 - Client-driven training

14. **Diversity Apprenticeship Program (DAP)** – Philadelphia, PA
 - Lucien Blackwell Program

15. **Philadelphia Electrical and Technology Charter High School (PET)** – Philadelphia, PA
 - Electrical Technology

16. **Philadelphia Housing Authority (PHA)** – Philadelphia, PA
 - Pre-Apprenticeship Construction Training Program (PACT): electrical, plumbing, carpentry, sheet metal, painting and drywall, and masonry.

17. **Swenson Arts and Technology School** – Philadelphia, PA
 - Construction Technology – Carpentry, Electricity and Plumbing

APPENDIX 11

Structured Interview for Union Officials

Name(s) _____

Local No. _____

Date _____

1. Tell me about your apprenticeship program. What geographic area does your union cover?

2. About how many applications do you receive for apprenticeship each year?

3. How many of these applicants end up testing?

4. How many applicants pass the test?

5. Tell me about the interview process.

6. How many apprentices do you empanel each year? Do you operate multiple cycles?

7. What kind of outreach do you perform to let people know about your apprenticeship program?

8. Where do most of your apprentices come from? Are there particular schools or sources you rely on? Are relatives or friends of existing workers a good source?

9. How else can people get into your trade?

10. Does your union require contractor sponsorship for apprenticeship? If not, do contractor referrals factor into your decisions regarding apprentice acceptance?

11. How are apprentices placed on projects?

12. About how many apprentices in your apprenticeship program drop out after the first year and how many by the end of the apprenticeship period? About how many apprentices in your apprenticeship program are dismissed during or after the first year and by the end of their apprenticeship period? In your experience, why do they drop out and what causes them to be dismissed?

13. Have you seen efforts in your union that are effective in increasing the diversity of your apprentices?

14. What suggestions would you make to increase the number of women, minorities and Philadelphia residents accepted into your apprenticeship program?

15. How do your journeymen obtain work? What is the union's role in referring or obtaining this work?

16. What information does your union collect regarding apprentice and journeymen demographics? What does this information indicate?

17. Is there anything else you would like to tell us?

Appendix 12

Contractor Interview Questions

Interview/Survey Questions for Contractors

1. How many construction projects has your company engaged in during the past year and what is the dollar range of these projects?
2. Do you know how many apprentices are employed on your job/by your company?
3. Do you solicit apprentices on your project? If so, how?
4. Have you sponsored apprentices in the past? If you do not employ trades that require sponsorship, have you recommended individuals to apprenticeship programs in the past?
5. Do you think that your projects have a sufficiently diverse workforce? Is your company satisfied or do you see room for improvement?
6. Do you actively seek the participation of businesses owned by minorities and women on your projects? Does your company employ participation goals or a formal program that encourages inclusion?
7. Does your company monitor projects to ascertain the level of minority and woman participation, both in terms of workforce and business participation?
8. Has your company partnered with contractors, trades unions, project managers, technical assistance providers or other entities to help you increase diversity on your projects?
9. What suggestions would you make to increase the number of minorities, women and Philadelphia residents on your projects? Similarly, what are your recommendations concerning minority and woman owned businesses?
10. Does your company provide incentives for staff who achieve greater inclusion? Is staff commitment to diversity evaluated as part of their overall job performance?

Appendix 13

Owner Interview Questions

Interview/Survey Questions for Owners

1. How many construction projects has your company engaged in during the past year and what is the dollar range of these projects?
2. Do you know how many apprentices are employed on your job/by your company?
3. Do you solicit apprentices on your project? If so, how?
4. Have you sponsored apprentices in the past? If you do not employ trades that require sponsorship, have you recommended individuals to apprenticeship programs in the past?
5. Do you think that your projects have a sufficiently diverse workforce? Is your company satisfied or do you see room for improvement?
6. Do you actively seek the participation of businesses owned by minorities and women on your projects? Does your company employ participation goals or a formal program that encourages inclusion?
7. Does your company monitor projects to ascertain the level of minority and woman participation, both in terms of workforce and business participation?
8. Has your company partnered with contractors, trades unions, project managers, technical assistance providers or other entities to help you increase diversity on your projects?
9. What suggestions would you make to increase the number of minorities, women and Philadelphia residents on your projects? Similarly, what are your recommendations concerning minority and woman owned businesses?
10. Does your company provide incentives for staff who achieve greater inclusion? Is staff commitment to diversity evaluated as part of their overall job performance?

APPENDIX 14

Numbers and Capacities of Construction Contractors

Philadelphia-Camden-Vineland Combined Statistical Area¹

| | All Owners | All Minority Owners ² | African American Owners | Hispanic American Owners | Asian American Owners | Native American Owners | Hawaiian Pacific Islander Owners | Female Owners |
|-----------------------------------|--------------|----------------------------------|-------------------------|--------------------------|-----------------------|------------------------|----------------------------------|---------------|
| All Firms | | | | | | | | |
| Number of Firms | 45,825 | 3,385 | 1,320 | 1,429 | NA | 115 | 8 | 3,515 |
| | 100% | 7.4% | 2.9% | 3.1% | - | 0.3% | 0.0% | 7.7% |
| Annual Receipts (\$1,000s) | \$28,261,361 | NA | \$175,127 | \$184,907 | NA | \$12,769 | NA | \$1,482,898 |
| | 100% | - | 0.6% | 0.7% | - | - | - | 5.2% |
| Firms with Paid Employees | | | | | | | | |
| Number of Firms | 13,591 | 439 | 174 | 153 | 74 | 36 | 8 | 1,118 |
| | 100% | 3.2% | 1.3% | 1.1% | 0.5% | 0.3% | 0.1% | 8.2% |
| Annual Receipts (\$1,000s) | \$26,249,827 | NA | \$140,966 | \$112,367 | NA | NA | NA | \$1,397,753 |
| | 100% | - | 0.5% | 0.4% | - | - | - | 5.3% |
| Number of Employees | 140,799 | NA | 1,138 | 554 | NA | 100-249 | 20-99 | 11,299 |
| | 100% | - | 0.8% | 0.4% | - | 0.1%-0.2% | 0.0%-0.1% | 8.0% |
| Payroll (\$1,000s) | \$5,793,703 | NA | \$61,174 | \$26,805 | NA | NA | NA | \$398,125 |
| | 100% | - | 1.1% | 0.5% | - | - | - | 6.9% |

¹U.S. Census Bureau, American FactFinder, Selected Statistics of Business Ownership by Kind of Business, Gender, Hispanic or Latino Origin, and Race: 2002

²"All Minority" figures will not match sum of specific minority groups because of overlapping specific minority categories - e.g., owners who are both African-American and Hispanic.

APPENDIX 15

Numbers and Capacities of Construction Contractors

City of Philadelphia¹

| | All Owners | All Minority Owners ² | African American Owners | Hispanic American Owners | Asian American Owners | Native American Owners | Hawaiian Pacific Islander Owners | Female Owners |
|-----------------------------------|-------------|----------------------------------|-------------------------|--------------------------|-----------------------|------------------------|----------------------------------|---------------|
| All Firms | | | | | | | | |
| Number of Firms | 4,971 | 1,074 | 581 | 453 | 182 | 18 | 1 | 541 |
| | 100% | 22% | 11.7% | 9.1% | 3.7% | 0.4% | 0.0% | 10.9% |
| Annual Receipts (\$1,000s) | \$2,578,683 | NA | \$61,141 | NA | \$24,919 | NA | NA | \$123,456 |
| | 100% | - | 2.4% | - | 1.0% | - | - | 4.8% |
| Firms with Paid Employees | | | | | | | | |
| Number of Firms | 1,013 | 106 | 51 | 28 | 22 | 5 | 0 | 126 |
| | 100% | 10% | 5.0% | 2.8% | 2.2% | 0.5% | 0.0% | 12.4% |
| Annual Receipts (\$1,000s) | \$2,422,002 | NA | \$51,407 | NA | \$22,015 | NA | \$0 | \$117,348 |
| | 100% | - | 2.1% | - | 0.9% | - | 0.0% | 4.8% |
| Number of Employees | 12,395 | NA | 513 | 100-249 | 113 | 1-19 | 0 | 1,247 |
| | 100% | - | 4.1% | 0.8%-2.0% | 0.9% | 0.0%-0.2% | 0.0% | 10.1% |
| Payroll (\$1,000s) | \$539,634 | NA | \$31,250 | NA | \$4,913 | NA | \$0 | \$44,432 |
| | 100% | - | 5.8% | - | 0.9% | - | 0.0% | 8.2% |

¹Special Tabulation provided by U.S. Census Bureau, November 2008

²Special Tabulation did not include "All Minority" figures. Here they are estimated with sums of specific minority groups. The estimates will be slightly too high because of overlapping specific minority categories - e.g., owners who are both African-American and Hispanic.

APPENDIX 16

Minority-Owned and Female-Owned Construction Contractors Available in Philadelphia Metropolitan Statistical Area from OEO List and Other Sources

| Type of Work | On OEO List | Not on OEO List |
|----------------------|-------------|-----------------|
| Carpentry | 11 | 4 |
| Concrete | 13 | 4 |
| Demolition | 28 | 4 |
| Electrical | 23 | 12 |
| Ironwork | 15 | 4 |
| General Construction | 74 | 12 |
| Other | 112 | 73 |
| All | 276 | 113 |

Source: Econsult Corporation tabulation

APPENDIX 17

Minority-Owned and Female-Owned Construction Contractors Available in Philadelphia Metropolitan Statistical Area by Race/Ethnicity, Gender, and Type of Work

| | | All Minorities | African American | Hispanic American | Asian American | Native American | Hawaiian Pacific Islander | Unknown | Caucasian |
|-----------------------------|---------------|----------------|------------------|-------------------|----------------|-----------------|---------------------------|---------|-----------|
| Carpentry | Male | 10 | 6 | 1 | 0 | 0 | 0 | 3 | - |
| | Female | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| Concrete | Male | 11 | 7 | 2 | 0 | 0 | 0 | 2 | - |
| | Female | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 4 |
| Demolition | Male | 23 | 19 | 3 | 0 | 0 | 0 | 1 | - |
| | Female | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 4 |
| Electrical | Male | 26 | 13 | 1 | 3 | 0 | 0 | 9 | - |
| | Female | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 7 |
| Ironwork | Male | 10 | 3 | 1 | 2 | 1 | 0 | 3 | - |
| | Female | 9 | 1 | 1 | 0 | 0 | 0 | 1 | 6 |
| General Construction | Male | 61 | 41 | 8 | 6 | 0 | 0 | 6 | - |
| | Female | 25 | 6 | 1 | 1 | 0 | 2 | 1 | 14 |
| Other | Male | 116 | 53 | 12 | 9 | 1 | 1 | 40 | - |
| | Female | 69 | 11 | 2 | 2 | 0 | 0 | 6 | 48 |
| All | Male | 257 | 142 | 28 | 20 | 2 | 1 | 64 | - |
| | Female | 132 | 27 | 5 | 3 | 0 | 2 | 9 | 86 |

Source: Econsult Corporation tabulation

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------------------|--------------|--------------|---|-----------------------|
| Accoustical Construction | NY | New York | Shen Milson & Wilke, Inc | MBE |
| Accoustical Construction | PA | Philadelphia | Metropolitan Acoustic | WBE |
| Accoustical Construction | PA | Philadelphia | Heartwood Building Group, Inc. | WBE |
| Accoustical Construction | PA | Philadelphia | Felder & Felder, Inc. | MBE |
| Alarms and Sprinklers | NJ | Hillsdale | Excel Supply Corp. | WBE |
| Alarms and Sprinklers | NJ | Thorofore | Majek Fire Protection, Inc. | WBE |
| Alarms and Sprinklers | NJ | Woodbury | Lomax Fire, LLC | MBE |
| Alarms and Sprinklers | PA | Bensalem | M & S Engineering Services | MBE |
| Alarms and Sprinklers | PA | Chadds Ford | Arora Engineers, Inc. | MBE |
| Alarms and Sprinklers | PA | Philadelphia | M.F.P Fire Protection Company, Inc | MBE/WBE |
| Alarms and Sprinklers | PA | Philadelphia | Digital Innovation | MBE |
| Carpentry | DE | Claymont | Parker Construction, Inc | MBE |
| Carpentry | NC | Stokesdale | Hammerhead Custom, Inc. | MBE |
| Carpentry | NJ | Bellmawr | M2 Furniture Services | MBE |
| Carpentry | PA | Bensalem | Keystone Tile & Marble | MBE |
| Carpentry | PA | Norristown | The Riff Group, LLC | WBE |
| Carpentry | PA | Perkasie | MEM Construction Inc | WBE |
| Carpentry | PA | Philadelphia | Nesmith & Co., Inc. | MBE |
| Carpentry | PA | Philadelphia | Castle Group Construction, LLC | MBE |
| Carpentry | PA | Philadelphia | United Construction Inc. T/A Equal Construction | MBE |
| Carpentry | PA | Philadelphia | A & B Unique Construction / Home Repair, Inc. | MBE |
| Carpentry | PA | Philadelphia | Universal Builders & Remodelers | MBE |
| Carpentry | PA | Philadelphia | New Hope Housing | MBE |
| Carpentry | PA | Philadelphia | Impressive Cabinetry & Design Inc. | MBE |
| Carpentry | PA | Pottstown | GPW Construction Inc | MBE |
| Carpentry | TN | Philadelphia | Wolverine Enterprises | WBE |
| Clean-Up | DE | Newark | Delaware Cleaning Company | MBE |
| Clean-Up | DE | Townsend | ALSolution, LLC | MBE |
| Clean-Up | MD | Germantown | Wyn's Cleaning & Services | MBE |
| Clean-Up | NJ | Sewell | Thesing Power Sweeping | WBE |
| Clean-Up | PA | Philadelphia | Hunter Davis Construction Company, Inc. | MBE |
| Clean-Up | PA | Philadelphia | Tradot Painting & Janitorial | MBE |
| Clean-Up | PA | Philadelphia | Philadelphia Floor Cleaning | MBE |
| Clean-Up | PA | Philadelphia | AC & S Contractors, Inc. | MBE |

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|----------------------|--------------|---------------|---|-----------------------|
| Clean-Up | PA | West Chester | Old Philadelphia Associates, Inc. | MBE |
| Concrete and Masonry | MD | Port Deposit | A.B.C. MINORITY ENTERPRISES, INC. | MBE/DBE |
| Concrete and Masonry | NJ | Hammonton | Krisanna Construction | WBE |
| Concrete and Masonry | NJ | Mays Landing | Lester Bailey & Associates | MBE |
| Concrete and Masonry | NJ | Mt. Holly | Atlantic Concrete Cutting, Inc. | WBE |
| Concrete and Masonry | PA | Bridgeport | Lake Glenn Enterprises, Inc. | MBE |
| Concrete and Masonry | PA | Folcroft | Quinn Construction, Inc. | WBE |
| Concrete and Masonry | PA | Harrisburg | Jones Masonry Restoration Corp. | MBE |
| Concrete and Masonry | PA | Langhorne | Zavorski Masonry Restoration, Inc. | WBE |
| Concrete and Masonry | PA | Levittown | S & D Masonry, Company | MBE |
| Concrete and Masonry | PA | Philadelphia | MG Cement Contractors | MBE |
| Concrete and Masonry | PA | Philadelphia | JR Burke, Inc. | MBE |
| Concrete and Masonry | PA | Philadelphia | Ultimate Concrete, LLC | MBE |
| Concrete and Masonry | PA | Philadelphia | M G Cement Contractors, Inc. | MBE |
| Concrete and Masonry | PA | Philadelphia | Overton Enterprise | MBE |
| Concrete and Masonry | PA | Philadelphia | James Wilson Construction Company | MBE |
| Concrete and Masonry | PA | Sharon Hill | Hamp Young General Contractor, Inc. | MBE |
| Concrete and Masonry | PA | Spring House | Davis Giovanazzo Construction Co, Inc. | MBE |
| Demolition | DE | Wilmington | Holley Enterprises, Inc. | MBE |
| Demolition | NJ | Atlantic City | Jacobs Contracting Svcs. Inc. | MBE |
| Demolition | NJ | Hainesport | Robert T. Winzinger Inc. | WBE |
| Demolition | NJ | Hammonton | Site Contractors, Inc. | WBE |
| Demolition | PA | Bensalem | ABC Construction | WBE |
| Demolition | PA | Chester | ML Parker Construction, Inc. | MBE |
| Demolition | PA | Harrisburg | Integrated Contractors, Suppliers & Consultants | MBE |
| Demolition | PA | Phila | R & R General Contractor, Inc. | MBE |
| Demolition | PA | Philadelphia | McKenzie Shearin, Inc. | MBE |
| Demolition | PA | Philadelphia | Interstate Demolition Inc. | MBE |
| Demolition | PA | Philadelphia | Inner City Construction Inc. | MBE |
| Demolition | PA | Philadelphia | Samara, Inc. | MBE |
| Demolition | PA | Philadelphia | Hannah & Sons Const. Co. | MBE |
| Demolition | PA | Philadelphia | MBA Enterprises, Inc. | MBE |
| Demolition | PA | Philadelphia | Hazeez Associates, Inc. | MBE |
| Demolition | PA | Philadelphia | Hart Enterprises & Assoc., Inc. | MBE |

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|----------------------------------|--------------|--------------|---|-----------------------|
| Demolition | PA | Philadelphia | Air Quality Group, Inc. | MBE |
| Demolition | PA | Philadelphia | BoJack Boys Construction Corporation | MBE |
| Demolition | PA | Philadelphia | Bey Star Demolition, LLC | MBE |
| Demolition | PA | Philadelphia | G.A.W Constuction | MBE |
| Demolition | PA | Philadelphia | ABC Construction T/A Accurate Building Contractors, LLC | MBE |
| Demolition | PA | Philadelphia | Ednic Construction Company, Inc. | MBE |
| Demolition | PA | Philadelphia | Landaverry Contractor | MBE |
| Demolition | PA | Philadelphia | Torrado Construction Co., Inc. | MBE |
| Demolition | PA | Philadelphia | Total Environmntal Concepts | MBE |
| Demolition | PA | Philadelphia | Riddick & Riddick General Contractors, Inc. | MBE |
| Demolition | PA | Philadelphia | J.B. Developers & Demolition Inc. | MBE |
| Demolition | PA | Philadelphia | Partlow & Riddick Construction | MBE |
| Demolition | PA | Philadelphia | ML Jones Construction, Inc. | MBE |
| Demolition | PA | Pipersville | Tamco Construction Inc | WBE |
| Demolition | PA | Skippack | Alta Technical Svcs, Inc. | MBE |
| Demolition | PA | Steelton | Lawson Demolition & Hauling Company | MBE |
| Electrical and Telecommunication | | | Paramount Electrical Services, LLC | DBE |
| Electrical and Telecommunication | | | ABE Electric | MBE |
| Electrical and Telecommunication | DE | Newark | Donaldson Electric, Inc. | MBE |
| Electrical and Telecommunication | DE | Newark | Integrity Technology Solutions, Inc. | MBE |
| Electrical and Telecommunication | IN | Carmel | Telamon Corporation | MBE |
| Electrical and Telecommunication | MD | Elkton | BILL'S CUSTODIAL SERVICES, INC. | MBE/DBE |
| Electrical and Telecommunication | MD | Laurel | Vizzion, Inc. | MBE |
| Electrical and Telecommunication | NJ | Camden | PRR Communications, Inc. | MBE |
| Electrical and Telecommunication | NJ | Cherry Hill | ESCO Elec Contr & Eng, LLC | MBE |
| Electrical and Telecommunication | NJ | Haddonfield | Arionda, LLC | WBE |
| Electrical and Telecommunication | NJ | Marlton | Mid-Atlantic Consultants, LLC | WBE |
| Electrical and Telecommunication | NJ | Willingboro | Welcome Electric | MBE |
| Electrical and Telecommunication | PA | Bristol | Final Mile Technologies | MBE |
| Electrical and Telecommunication | PA | Glenside | Holder, Inc T/A Donovan Electric | MBE |
| Electrical and Telecommunication | PA | Harrisburg | Apple Electric | MBE |
| Electrical and Telecommunication | PA | Philadelphia | R F Design & Integration, Inc. | WBE |
| Electrical and Telecommunication | PA | Philadelphia | S&G Electric Inc | MBE |
| Electrical and Telecommunication | PA | Philadelphia | James Copeland Electrical | MBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|----------------------------------|--------------|--------------|--|-----------------------|
| Electrical and Telecommunication | PA | Philadelphia | Precision Electric, Inc. | MBE |
| Electrical and Telecommunication | PA | Philadelphia | JL Glenn Electrical | MBE |
| Electrical and Telecommunication | PA | Philadelphia | MCN Electrical | MBE |
| Electrical and Telecommunication | PA | Philadelphia | MJK Electrical Corporation, Inc | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Aubrey Green Electric Incorporated | WBE |
| Electrical and Telecommunication | PA | Philadelphia | Flex E. Communications, Inc. | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Fourth River SignWorks | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Percell Blige Electrical Contractor | MBE |
| Electrical and Telecommunication | PA | Philadelphia | CGW Electric, Inc. | MBE |
| Electrical and Telecommunication | PA | Philadelphia | FMJ Telecom/Electrical Services | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Spectrum Electric, Inc. | WBE |
| Electrical and Telecommunication | PA | Philadelphia | Eley Electrical Contractors | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Interconnect Products, Inc. | WBE |
| Electrical and Telecommunication | PA | Philadelphia | Chisom Electrical Contractors | MBE |
| Electrical and Telecommunication | PA | Philadelphia | Apex Electrical Services, LLC | MBE |
| Electrical and Telecommunication | PA | Philadelphia | A. M. Electric, Inc. | MBE |
| Electrical and Telecommunication | PA | Upper Darby | Hitech Services, Inc. | MBE |
| Electrical and Telecommunication | PA | Warminster | Gonzalez DiSandro, Inc. | MBE |
| Electrical and Telecommunication | PA | West Chester | Alfred J. Fry, III, Inc. | WBE |
| Excavation | PA | Bensalem | Iron Horse Excavating | MBE |
| Excavation | PA | Philadelphia | General Excavating and Demolition, Inc. | MBE |
| Excavation | PA | Yeadon | Brock Brothers Construction Company Inc. | MBE |
| Fencing | NJ | Cedar Brooks | Desilvio & Co. Inc | WBE |
| Flooring | DE | Middletown | Parkway Floors, Inc. | MBE |
| Flooring | PA | Boothwyn | Smith Flooring Inc | MBE |
| Flooring | PA | Broomall | Classic Marble & Stone Restoration, Inc. | WBE |
| Flooring | PA | Philadelphia | Copeland Contractors, LLC | MBE |
| General Contractor | | | Choates General Contracting | MBE |
| General Contractor | CA | Culver City | CMTS, Inc. | MBE |
| General Contractor | DE | Bear | JSW Ventures, Inc. | MBE |
| General Contractor | DE | Wilmington | CNS Construction Corp. | MBE |
| General Contractor | IL | Skokie | Meccor Industries Ltd | MBE |
| General Contractor | MD | Landover | Delaware Cornerstone Builders, Inc. | MBE |
| General Contractor | NJ | Camden | FEH Global Development, LLC | MBE |

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------------|-------|-----------------|--|----------------|
| General Contractor | NJ | Camden | Lindsay & Sons Construction | MBE |
| General Contractor | NJ | Cherry Hill | The Smith Co. Group, Inc. | MBE |
| General Contractor | NJ | Cherry Hill | Wu & Associates, Inc. | MBE |
| General Contractor | NJ | Cherry Hill | Winstar Construction Co. Inc. | MBE |
| General Contractor | NJ | Franklinville | RMS Construction Inc. | WBE |
| General Contractor | NJ | Hainesport | J. Patterson, LLC | MBE |
| General Contractor | NJ | Mt. Ephraim | Fanellie Construction Inc | MBE |
| General Contractor | NJ | Newark | Reva, Inc. | MBE |
| General Contractor | NJ | Pennsauken | Sambe Construction Co Inc. | WBE |
| General Contractor | NJ | Plainfield | Solid Rock Construction of NJ, Inc. | MBE |
| General Contractor | NJ | Pleasantville | Network Construction Co. | MBE |
| General Contractor | NJ | Sewell | MT Martin, Inc. | MBE |
| General Contractor | NJ | South Hampton | Fahs Restoration, Inc | WBE |
| General Contractor | NJ | Trenton | Avery Construction Company, Inc. | MBE |
| General Contractor | NJ | Williamstown | Compliance Management Group, Inc. | MBE |
| General Contractor | NJ | Woodbury | Merchant Construction Co. | MBE |
| General Contractor | PA | Ambler | WODOit All, LLC | MBE |
| General Contractor | PA | Bensalem | Smith Construction Company Inc. | WBE |
| General Contractor | PA | Bensalem | Cornwells Constr. Co., Inc. | WBE |
| General Contractor | PA | Bethlehem | Bethlehem Construction Corporation | MBE |
| General Contractor | PA | Central City | Zan, Inc. | MBE |
| General Contractor | PA | Eddystone | Cocco Contracting Corporation | WBE |
| General Contractor | PA | Feasterville | Ritter Contracting, Inc. | WBE |
| General Contractor | PA | Fort Washington | Fletcher Harlee Corp. | MBE |
| General Contractor | PA | Gap | Berner Construction Incorporated | WBE |
| General Contractor | PA | Glenside | Anvi & Associates, Inc. | MBE |
| General Contractor | PA | Jamison | Cedotal Construction | MBE |
| General Contractor | PA | King of Prussia | JBC Associates, Inc | WBE |
| General Contractor | PA | Lafayette Hill | Len Parker Associates, Inc. | MBE |
| General Contractor | PA | Norristown | Pride Enterprises, Inc. | MBE |
| General Contractor | PA | North Wales | Patterson & Company, Inc. | MBE |
| General Contractor | PA | Phila | Franklin Construction Project Managers, Inc. | MBE |
| General Contractor | PA | Philadelphia | Molly Construction Co., Inc. | WBE |
| General Contractor | PA | Philadelphia | Cruz, Inc. | MBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------------|--------------|------------------|---|-----------------------|
| General Contractor | PA | Philadelphia | Minute Construction | MBE |
| General Contractor | PA | Philadelphia | Hamada, Inc. | MBE |
| General Contractor | PA | Philadelphia | Unlead-It Environmental Services | MBE |
| General Contractor | PA | Philadelphia | Thomas Environmental Services, Inc | MBE/WBE |
| General Contractor | PA | Philadelphia | Sylvester Cheatham Home Remodeling | MBE |
| General Contractor | PA | Philadelphia | Artis T. Ore, Inc. | MBE |
| General Contractor | PA | Philadelphia | J.B.D. Contractors, Inc. | MBE |
| General Contractor | PA | Philadelphia | Bittenbender Construction, LP | WBE |
| General Contractor | PA | Philadelphia | Linda Pepe Contractor, Inc. | MBE |
| General Contractor | PA | Philadelphia | Andrew Robinson General Contracting | MBE |
| General Contractor | PA | Philadelphia | Complete Construction Assistance | MBE |
| General Contractor | PA | Philadelphia | Ramos & Associates, Inc. | MBE |
| General Contractor | PA | Philadelphia | Orlind Construction, Inc. | WBE |
| General Contractor | PA | Philadelphia | GENESIS GROUP CONST. SERV. | MBE |
| General Contractor | PA | Philadelphia | AM PM Nursing Agency, Inc. | MBE |
| General Contractor | PA | Philadelphia | Sensible Developments, LLC | MBE |
| General Contractor | PA | Philadelphia | Tierra Construction Services, LLC | MBE |
| General Contractor | PA | Philadelphia | Larry C. McCrae, Inc. | MBE |
| General Contractor | PA | Philadelphia | Raul Santos General Contractor/DBA Santos Contracting | MBE |
| General Contractor | PA | Philadelphia | Martin Bean Renovation & Associates, Inc. | MBE |
| General Contractor | PA | Philadelphia | Innovative Real Estate Investing | MBE |
| General Contractor | PA | Philadelphia | Perryman Building & Construction | MBE |
| General Contractor | PA | Philadelphia | Fayroni Contractors | MBE |
| General Contractor | PA | Philadelphia | STR8Hand Management, Inc. | MBE |
| General Contractor | PA | Philadelphia | Al Muhsinun Construction, LLC | MBE |
| General Contractor | PA | Philadelphia | Roberson Construction, Company | MBE |
| General Contractor | PA | Philadelphia | Puente Construction Enterprises, Inc. | MBE |
| General Contractor | PA | Philadelphia | RPM General Contractors, Inc | MBE |
| General Contractor | PA | Philadelphia | J. Mann R. Finley, Inc. | WBE |
| General Contractor | PA | Philadelphia | T. T. S. Enterprises d/b/a Lindsay, Sons & Company | MBE |
| General Contractor | PA | Philadelphia | Shearin Richardson Construction, Inc. | MBE |
| General Contractor | PA | Philadelphia | Fixem Inc. | MBE |
| General Contractor | PA | Philadelphia | Bond Construction Co., LLC | MBE |
| General Contractor | PA | Plymouth Meeting | Atrium International, Inc. | MBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------------|--------------|------------------|--|-----------------------|
| General Contractor | PA | Plymouth Meeting | Atricon, LLC | MBE |
| General Contractor | PA | Plymouth Meeting | Tolentino Contracting Company | MBE |
| General Contractor | PA | Pottstown | Cedar Spring Construction | MBE |
| General Contractor | PA | Rydal | Building Restoration, Inc. | WBE |
| General Contractor | PA | Secane | USV Construction Corp. | MBE |
| General Contractor | PA | Springfield | DHC Construction Inc. | MBE |
| General Contractor | PA | Valley Forge | Adkins Management, Inc. | MBE |
| General Contractor | PA | Worcester | Verrazano Builders & Contractors | DBE |
| General Contractor | PA | Wyncote | David Bell General Contractor | MBE |
| General Contractor | PA | Wyndmoor | Canales General Contracting, Inc. | MBE |
| General Contractor | PA | Yardley | Midatlantic Construction & Design, Inc. | MBE |
| General Contractor | PA | Yeadon | C.B. Community Remodeling Development Group, Inc. | MBE |
| Glass & Glazing | MD | Baltimore | Mahogany, Inc. | MBE |
| Glass & Glazing | PA | Philadelphia | Graboyes Comm. Window Co. | WBE |
| Glass & Glazing | PA | Philadelphia | Glasstoration Technologies, LLC | WBE |
| Glass & Glazing | PA | Philadelphia | Olde City Craftsmen, Inc. | MBE |
| Glass & Glazing | PA | Philadelphia | U.S. Glass & Metal, Inc. | WBE |
| Glass & Glazing | PA | Philadelphia | Top Construction, Inc. | MBE |
| Glass & Glazing | PA | Philadelphia | CENTRAL GLASS INC | MBE |
| Glass & Glazing | PA | Philadelphia | Emerald Windows, Inc. | MBE |
| HVAC | DE | Middletown | Summit Mechanical | MBE |
| HVAC | NJ | Camden | Arline, LLC | MBE |
| HVAC | NJ | Pennsauken | Keith & Jacqueline Conroy, Inc dba W. Jersey AC & Heat | WBE |
| HVAC | NY | Buffalo | Velco Mechanical & Fabricating | MBE |
| HVAC | PA | Drexel Hill | Guaranteed Comfort, Inc. | MBE |
| HVAC | PA | Media | Media Plumbing and Heating Incorporated | MBE |
| HVAC | PA | Norristown | Accord Mechanical & Management Services, Inc. | MBE |
| HVAC | PA | Philadelphia | C. E. Franklin, Inc. | MBE |
| HVAC | PA | Philadelphia | Jowers, Inc. | MBE |
| HVAC | PA | Philadelphia | Diamond Sheet Metal, Inc. | MBE |
| HVAC | PA | Philadelphia | Quality Heating & Sheet Metal, Inc. | WBE |
| HVAC | PA | Philadelphia | Advantage Contracting, Inc. | MBE |
| HVAC | PA | Richboro | McCorry Mechanical Services, Inc. | WBE |
| Hauling | IL | Chicago | Select Environmental Services | MBE |

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|----------------------|--------------|------------------|--|-----------------------|
| Hauling | MD | Cecilton | M & G Hauling | MBE |
| Hauling | MD | Hebron | S & H Farms, Inc. | WBE |
| Hauling | NJ | Hillside | Leticia, Inc. | MBE |
| Hauling | NJ | Pennsauken | Eva Glasgow Contractors Inc. | WBE |
| Hauling | PA | Lansdale | SIJ Hauling | MBE |
| Hauling | PA | Norristown | Single-Ton's Contracting, Inc. | MBE |
| Hauling | PA | PHILADELPHIA | JKT CONTRACTORS & DEVELOPMENT CO. INC. | MBE |
| Hauling | PA | Philadelphia | Ferrick Construction Co., Inc. | WBE |
| Hauling | PA | Philadelphia | Silver Top, Inc. | MBE |
| Hauling | PA | Philadelphia | Disposal Corp. of America | MBE |
| Hauling | VA | Woodbridge | Milton F. Wright Trucking, Inc. | MBE |
| Hazmat/Waste Removal | MA | Lowell | Mill City Environmental Corporation | MBE |
| Hazmat/Waste Removal | NJ | Newark | Prime Environmental Services, Inc. | MBE |
| Hazmat/Waste Removal | NJ | South Plainfield | Del-Med, Inc. | MBE |
| Hazmat/Waste Removal | PA | Philadelphia | National Diesel Filtration Specialist, LLC | MBE |
| Hazmat/Waste Removal | PA | Philadelphia | Love and Sons, LLC | MBE |
| Hazmat/Waste Removal | PA | Philadelphia | A & C Environmental Services, Inc. | MBE |
| Hazmat/Waste Removal | PA | Pottstown | BPA Environmental Svcs. | MBE |
| Hazmat/Waste Removal | PA | Upper Darby | USA Environmental Management, Inc. | MBE |
| Hazmat/Waste Removal | VA | Remington | Recyc Systems, Inc. | WBE |
| Highway | NJ | Cinnaminson | Griffin Sign, Inc. | WBE |
| Highway | NJ | Marlton | SJA Construction, Inc. | WBE |
| Highway | PA | Media | Gessler Construction Co., Inc. | WBE |
| Highway | PA | Philadelphia | T & G Construction | MBE |
| Highway | PA | Philadelphia | Olivieri & Associates, Inc. | WBE |
| Highway | PA | Sellersville | Established Traffic Control, Inc. | WBE |
| Highway | PA | Souderton | Guidemark, Inc. | WBE |
| Insulation | NJ | Trenton | M & R Insulation Systems, LLC | WBE |
| Insulation | PA | Allentown | Durant Enterprise, Inc. | MBE |
| Insulation | PA | Dresher | HF3 Construction Inc | MBE |
| Insulation | PA | Philadelphia | Seamless Professionals, LLC | MBE |
| Insulation | PA | Philadelphia | J & M Insulation Co. | MBE |
| Ironwork | CT | West Haven | Marikina Construction Corp. | MBE |
| Ironwork | DE | Delmar | Crystal Steel Fabricators, Inc. | MBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------|--------------|-------------------|--|-----------------------|
| Ironwork | DE | Wilmington | Helmark Steel, Inc. | MBE |
| Ironwork | MD | North East | M & M Precast, Inc. | MBE |
| Ironwork | NJ | Cherry Hill | L & R Construction Co., Inc. | WBE |
| Ironwork | NJ | Paulsboro | AAA Steel & Construction., LLC | MBE |
| Ironwork | NJ | Pleasantville | Bayshore Rebar Inc. | WBE |
| Ironwork | NJ | Sewell | Mitchell Bar Placement, Inc. | WBE |
| Ironwork | NY | New Rochelle | Solera Construction, Inc. | MBE |
| Ironwork | PA | Doylestown | Sundance Steel | MBE |
| Ironwork | PA | Huntingdon Valley | Commonwealth Metal Co. | WBE |
| Ironwork | PA | Lancaster | Powell Steel Corp. | MBE |
| Ironwork | PA | Langhorne | Specialty Steel Supply Co. | WBE |
| Ironwork | PA | Philadelphia | Wes World Fabrications, Inc. | MBE |
| Ironwork | PA | Philadelphia | UMOJA Erectors, LLC | MBE |
| Ironwork | PA | Philadelphia | Lyman H. Styles PE, PLS | MBE |
| Ironwork | PA | Philadelphia | Dantour Global Development Group | MBE/WBE |
| Ironwork | PA | Philadelphia | Komplete Welding | MBE |
| Ironwork | SC | Columbia | Owen Steel Company, Inc. | MBE |
| Ironwork | TX | Roanoke | Cadit Company, Inc. | DBE |
| Landscaping | DE | Hockessin | Taylor Landscape Contractors, Inc. | MBE |
| Landscaping | NJ | Camden | Picture Perfect Lawn, Inc. | MBE |
| Landscaping | NJ | Pittsgrove | Alliance Landscaping | WBE |
| Landscaping | PA | Aston | Frانيا, Inc | WBE |
| Landscaping | PA | Bensalem | Midori Professional Service | MBE |
| Landscaping | PA | Flourtown | Still-Man Tree Service, Inc. | MBE |
| Landscaping | PA | Green Hills | Minority Services., Inc. | WBE |
| Landscaping | PA | Huntingdon Valley | American Envir. Cleanup, Inc. | WBE |
| Landscaping | PA | Malvern | Riegel Resources, LLC | WBE |
| Landscaping | PA | Philadelphia | V Tech Services, Inc. | MBE |
| Landscaping | PA | Philadelphia | Nico Landscaping, Inc. | WBE |
| Landscaping | PA | Philadelphia | Del Services Inc. | WBE |
| Landscaping | PA | Philadelphia | Dooley's Landscaping and Tree Care Services, LLC | MBE |
| Landscaping | PA | Philadelphia | Four Seasons Total Landscaping | WBE |
| Landscaping | PA | Phoenixville | S & H Interiorscapes, Inc. | WBE |
| Landscaping | PA | West Chester | Ram T. Corporation | WBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|----------|-------|-----------------|--|----------------|
| Other | | | VJ Supply Inc | MBE |
| Other | | | OHM Tech Inc. | MBE |
| Other | | | Pan Am Realty Co, Inc. | MBE |
| Other | | | Gilbert Community Construction | MBE |
| Other | | | Hinkel Equipment Rental Associate Inc. | WBE |
| Other | | | Wong Fleming PC | MBE/WBE |
| Other | | | Equal Construction | MBE |
| Other | | | RB Adhuria | MBE |
| Other | DE | Wilmington | Sino-American Resources, LLC | MBE |
| Other | IL | Lansing | CCL Construction, Inc. | WBE |
| Other | MD | Elkton | Bayside Community Network | MBE |
| Other | MD | Elkton | E.J. Sprague Co, LLC | MBE |
| Other | MD | Germantown | Universal Building Services, Inc. | MBE |
| Other | MD | Port Deposit | CCAPS Construction, LLC | MBE |
| Other | NJ | Camden | Fleet Construction | MBE |
| Other | PA | Glenside | N.B. Builders & Developers | MBE |
| Painting | NJ | Absecon | Hispanic Ventures, Inc. | MBE |
| Painting | PA | Chadds Ford | Cast Construction, Inc. | WBE |
| Painting | PA | Downingtown | Avilion, Inc. | WBE |
| Painting | PA | Essington | Kustom Painting, Inc. | WBE |
| Painting | PA | Fort Washington | Leaks Construction, LLC | MBE |
| Painting | PA | Horsham | Applewood Enterprises, Inc. | WBE |
| Painting | PA | Jeffersonville | Buttonwood Painting Contractors, Inc. | WBE |
| Painting | PA | Montgomeryville | Circle Wallcoverings | WBE |
| Painting | PA | Philadelphia | McKee's Painting Contractors | MBE |
| Painting | PA | Philadelphia | A&M Painting | MBE |
| Painting | PA | Philadelphia | Beautiful Homes, Inc. | MBE |
| Painting | PA | Philadelphia | KIA Enterprises, Inc. | MBE |
| Painting | PA | Philadelphia | Victory Painting, LLC | MBE |
| Painting | PA | Philadelphia | W & W Contractors, Inc. | MBE |
| Painting | PA | Philadelphia | M.F.O Painting Brigade | MBE |
| Painting | PA | Philadelphia | Albert Battle t/a Al The Painter | MBE |
| Painting | PA | Philadelphia | Step by Step Custom Painting | MBE |
| Painting | PA | Philadelphia, | Gracie Painting, LLC | MBE |

APPENDIX 18

| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|------------------|--------------|-----------------|---|-----------------------|
| Painting | PA | Willow Grove | Pioneer Contracting, Inc. | WBE |
| Plumbing | | | Plumbings Works, Inc. | MBE |
| Plumbing | NJ | Lincoln Park | ASCON | MBE |
| Plumbing | NY | Staten Island | Varlotta Construction Corp. | WBE |
| Plumbing | PA | Philadelphia | E. Cobbs & Associates | MBE |
| Plumbing | PA | Philadelphia | Ingrams Plumbing | MBE |
| Plumbing | PA | Philadelphia | My-Leak Plumbing | MBE |
| Professional | NJ | Camden | Jackson & Associates | MBE |
| Professional | PA | Philadelphia | PAK International Engineering & Construction, Inc | MBE |
| Professional | PA | Philadelphia | Gilliard & Associates | MBE |
| Professional | PA | Philadelphia | Marianna Thomas Architects | WBE |
| Roofing | | | Dooley Bros. Roofing, Inc. | WBE |
| Roofing | DE | New Castle | Commercial Roofing of Delaware | WBE |
| Roofing | LA | Natchitoches | Clark Roofing Co. | MBE |
| Roofing | NJ | Blackwood | Brown & Guarino Inc | WBE |
| Roofing | NJ | Pennsauken | Sealant Technology | WBE |
| Roofing | PA | Bristol | Shippee Mechanical, Inc. | WBE |
| Roofing | PA | Philadelphia | Walt's Roofing | MBE |
| Roofing | PA | Philadelphia | North American Roofer, Inc. | MBE |
| Roofing | PA | Philadelphia | W. D. H. Construction | MBE |
| Roofing | PA | Philadelphia | S & L Roofing | MBE |
| Roofing | PA | Philadelphia | Supreme Roofing | MBE |
| Roofing | PA | Philadelphia | Richards Roofing Co., Inc. | MBE |
| Roofing | PA | Philadelphia | One Man Gang | MBE |
| Roofing | PA | Philadelphia | RM Roofing Group, Inc. | MBE |
| Sheetmetal | PA | Philadelphia | A N S Steel Company, LLC | WBE |
| Sheetmetal | PA | Philadelphia | Helcrist Iron Works | MBE |
| Siding & Gutters | NJ | Pennsauken | Keystone Contractors, Inc | WBE |
| Welding | PA | Chester | Iron Man, Inc. | MBE |
| Welding | PA | East Greenville | Bridg-It Fabricators, Inc. | WBE |
| Welding | PA | Harleysville | Quinco Contracting & Maintenance, Inc. | WBE |
| Welding | PA | Jeannette | J & T Welding, Inc. | MBE |
| Welding | PA | Philadelphia | Precision Steel Construction, Inc. | MBE |
| Welding | PA | Philadelphia | De Soto Iron Works | MBE |

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| TRADE | STATE | CITY | COMPANY NAME | MBE/WBE STATUS |
|--------------|--------------|--------------|------------------------------|-----------------------|
| Welding | PA | Philadelphia | Braham Welding & Ironworks | MBE |
| Welding | PA | Philadelphia | Majestic Steel Constr. Corp. | MBE |

Appendix 19

Timeline

Timeline for Workforce Recommendations (Section III)

| Recommendation Number | By June 2009 | By Dec 2009 | During 2010 |
|--------------------------|-----------------|----------------|----------------|
| 1 | X | | |
| 2 | X | | |
| 3 | | | X |
| 4 | | X | |
| 5 | X | | |
| 6 | X | | |
| 7 | X | | |
| 8 | X | | |
| 9 | X | | |
| 10 | X | | |
| 11 | X | | |
| 12 | X | | |
| 13 | | X | |
| 14 | | X | |
| 15 | X | | |
| 16 | X | | |
| 17 | X | | |
| 18 | X | | |
| 19 | X | | |
| 20 | | X | |
| 21 | | X | |
| 22 | | X | |
| 23 | X | | |
| 24 | X | | |
| 25 | X | | |
| 26 | X | | |
| 27 | X | | |
| 28 | X | | |
| 29 | X | | |
| 30 | X | | |
| 31 | | X | |
| 32 | | X | |
| 33 | X | | |
| 34 | X | | |
| 35 | X | | |
| 36 | X | | |
| 37 | | X | |
| 38 | | | X |
| 39 | X | | |
| 40 | | X | |
| 41 | X | | |
| 42 | X | | |
| 43 | X | | |
| 44 | X | | |

Timeline for Contracting Recommendations (Section IV)

| Recommendation Number | By June 2009 | By Dec 2009 | During 2010 |
|-----------------------|--------------|-------------|-------------|
| 1 | X | | |
| 2 | | X | |
| 3 | | X | |
| 4 | X | | |
| 5 | | X | |
| 6 | | X | |
| 7 | X | | |
| 8 | | X | |
| 9 | X | | |
| 10 | X | | |
| 11 | X | | |
| 12 | X | | |
| 13 | X | | |
| 14 | X | | |
| 15 | | X | |
| 16 | X | | |
| 17 | X | | |
| 18 | X | | |
| 19 | X | | |
| 20 | X | | |
| 21 | X | | |
| 22 | X | | |
| 23 | | X | |
| 24 | | X | |
| 25 | | X | |
| 26 | | X | |
| 27 | X | | |
| 28 | X | | |
| 29 | X | | |
| 30 | X | | |
| 31 | | X | |