

Employment Guidebook



Careers in Construction

INSIDE:

The construction industry is predicted to add approximately 1 million new jobs by 2012 – making it among the economy's top 10 largest sources of job growth, according to the U.S. Department of Labor, Bureau of Labor Statistics.



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The construction industry is booming. Despite a recent cooling down in residential building, construction spending remains strong. With total employment in the United States expected to reach 165.3 million by 2012, construction-related occupations are expected to see a proportionate increase in new jobs. For electricians, the U.S. Bureau of Labor Statistics (BLS) predicts a 15.1 percent change in the number of jobs by 2012. For carpenters, an expected 122,000 new jobs; and for construction managers, 47,000. The industry also has a large number of self-employed workers. Overall, the employment outlook is healthy for those who are interested in the construction trades.

Selected Opportunities in Construction

While there are numerous job opportunities in construction, this guidebook will highlight only a selected few. Those who are interested in this industry are urged to conduct additional research through the following organizations and websites: U.S. Department of Labor (www.dol.gov); D.C. Department of Employment Services (www.does.dc.gov) and www.dc.networks.org; www.careervoyages.gov; www.careeronestop.org; www.workforce3.one.org

Construction Career Organizations

The following organizations may be useful in identifying careers in the construction trades:

D.C. Office of Apprenticeship Information and Training
609 H Street, N.E., Room 406
Washington, D.C. 20002
(202) 698-5099

Associated General Contractors of America
2300 Wilson Blvd.
Suite 400
Arlington, VA 22201
www.agc.org

The National Association of Home Builders
1201 15th Street, NW
Washington, DC 20005
www.nahb.org

The National Heavy & Highway Alliance
901 16th Street NW
Washington, DC 20006
www.heavyhighway.org

Associated Builders and Contractors
4061 Powder Mill Road
Suite 120
Calverton, Maryland 20705
(301) 595-9711
Fax: (301) 595-9718

Independent Electric Contractors
PO Box 147
Odenton, Maryland 21115
(301) 621-9545

Youthbuild USA
58 Day Street
Somerville, MA 02177
www.youthbuild.org

Youthbuild Local Offices
NAFFCCA YouthBuild
5505 Fifth Street, NW
Suite 500
Washington, DC 20011
(202) 291-1603

ARCH Training Center, YouthBuild
1227 Good Hope Road SE
Washington, DC 20020-6907
(202) 889-5000

LAYC YouthBuild
Latin American Youth Center
3014 14th Street, NW
Washington, DC 20009-4773
(202) 518-0601

Sasha Bruce Youthbuild
Administrative Office
2804 Martin Luther King Avenue, SE
Washington, DC 20032
(202) 675-9355



Construction Laborers perform a variety of jobs such as removing asbestos or lead-based paint from buildings; removing trees and debris; and tending pumps, compressors and generators.

- **Working Conditions.** Lifting and carrying of heavy objects is required; so is stooping, kneeling, crouching, and crawling in awkward positions. Work shifts are generally 8-hours. Highway projects require working overnight.
- **On-the-Job Risks.** Exposure to harmful materials and chemicals is a top risk. Workers must wear safety clothing such as gloves, hardhats, protective chemical suits and devices to protect their eyes, respiratory system, and hearing.
- **Education and Training.** Apprenticeship programs of two to four years of classroom and on-the-job training is recommended. A core curriculum of basic construction skills such as blue print reading, correct usage of tools and equipment, and knowledge of safety and health procedures comprises the first 200 hours of training. The remainder of the curriculum consists of specialized training in building construction, heavy/highway construction, and environmental remediation. Ability to communicate in Spanish is also recommended. * **Average D.C. hourly wage: \$12.14.**

Construction and Building Inspectors inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations.

- **Working Conditions.** Climb ladders or flights of stairs and crawl around tight spaces. Work hours varied depending on whether or not the inspector is self employed. Many inspectors, however, work for the government and have regular work-hour schedules.
- **On-the-Job Risks.** Construction inspectors must wear hardhats and adhere to safety requirements while at a construction site.
- **Education and Training.** At a minimum, a high school diploma or GED certificate is required, even for workers with considerable experience. Employers look for workers who have studied building inspection, construction technology, drafting, and math. Community colleges offer certificates or associate's degree programs in building inspection technology. Courses in blueprint reading, algebra, geometry, and English are useful. * **Average D.C. hourly wage: \$23.30.**

Sheet Metal Workers make, install, and maintain heating, ventilation, and air-conditioning duct systems, roofs, siding, rain gutters, and downspouts.

- **Working Conditions.** Workers work a 40-hour week. They stand for long periods and lift heavy materials

and finished pieces.

- **On-the-Job Risks.** Workers work around high-speed machines and are subject to cuts from sharp metal, burns from soldering and welding, and falls from ladder and scaffolding. They must wear safety glasses and avoid jewelry or loose fitting clothing that could easily get caught in machines.
- **Education and Training.** Four to five year apprenticeship program offering comprehensive instruction in sheet metal fabrication and installation, as well as on-the-job training, is necessary. High math and mechanical aptitude and good reading skills are a must. Courses in algebra, trigonometry, geometry and mechanical drawing are essential. * **Average D.C. hourly wage: \$23.03.**

Electricians install, maintain, and repair electrical wiring, equipment, and fixtures in accordance with relevant codes.

- **Working Conditions.** Electricians work both indoors and outdoors. Bending, lifting heavy objects, standing, stooping, and kneeling for long periods of time are common.
- **On-the Job Risks.** Electrical shock, falls, and cuts are prevalent in this industry.
- **Education and Training.** Four-year apprenticeships that combines 2,000 hours of on-the-job training with 144 hours of related classroom instruction is recommended. Ability to solve arithmetic problems quickly and accurately is required. Good color vision is needed since workers must frequently identify electrical wires by color. * **Average D.C. hourly wage: \$20.30.**

Plumbers assemble, install, and repair pipes, fittings, and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes.

- **Working Conditions.** Plumbers must lift heavy pipes, stand for long periods, and sometimes work in uncomfortable or cramped positions.
- **On-the-Job Risks.** Plumbers are subjected to possible falls from ladders, cuts from sharp tools, and burns from hot pipes or soldering equipment.
- **Education and Training.** Formal apprenticeships (four to five years on-the-job training plus a minimum of 144 hours of related classroom instruction) provide the most comprehensive training. A high school diploma or GED certificate is required. Courses in general mathematics, drafting, blueprint reading, computers and physics are excellent preparation. * **Average D.C. hourly wage: \$24.32.**

* Source: Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections; Department of Employment Services, Labor Market Information

Construction industry provides excellent career opportunities

The construction industry offers financially rewarding opportunities, many of which require a solid education with workers showing proficiency in math or physics, and fluency in a second language. Listed below are several design and construction job opportunities with their starting salaries. *(The estimated starting salary ranges are typical of a metropolitan area such as Washington, D.C.)*



Architect - plans and designs structures of all types—bridges, sports stadiums, power plants, office buildings—assembling and analyzing appropriate materials to make a structure safe, attractive, and durable. **Entry-level salary ranges: \$30,000 to \$40,000.**

Project Manager - supervises subcontractors, material inventories, labor schedules, and cost performance using computer-aided project planning tools, global positioning systems, and cutting edge technologies to manage large construction projects. **Entry-level salary ranges: \$45,000 to \$55,000.**

Landscape Architect - plans the location of buildings, roads, and waterways and the arrangement of trees and flowers so that the outdoor areas surrounding buildings, industrial plants, shopping centers, recreation areas, and housing divisions are attractive, functional, and preserve the historic and natural environment. **Entry-level salary ranges: \$30,000 to \$40,000.**

Computer-Aided Design Draftsman - transforms makeshift engineering and architectural sketches into finished computerized drawings and databases. **Entry-level salary ranges: \$25,000 to \$35,000.**

Surveyor - establishes boundaries for the job site before construction begins and measures and records distances and elevations throughout a project to precisely place new structures. **Entry-level salary ranges: \$30,000 to \$35,000.**

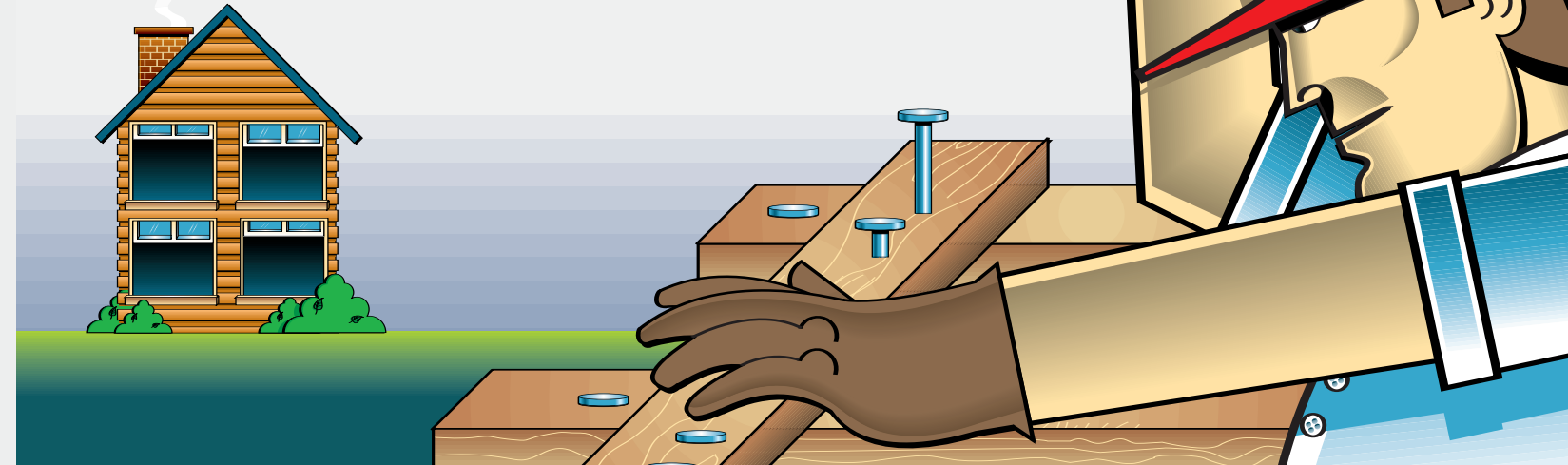
Civil Engineer - designs and supervises the construction and renovation of major manmade projects to include airports, buildings, bridges, roads, railroads, and electric power plants. Uses state-of-the-art computer programs to evaluate new materials and execute innovative structural designs to meet building code safety requirements. **Entry-level salary ranges: \$30,000 to \$50,000.**

Electrical Engineer - plans, installs, and tests electrical service and wire systems used to provide heat, light, power, air conditioning and refrigeration in homes, office buildings, factories, hospitals, and schools. **Entry-level salary ranges from: \$40,000 to \$50,000.**

Interior Space Planner/Designer - plans and designs the interior spaces of office buildings and industrial plants. Develops layouts and fixtures to ensure office spaces are functionally efficient, attractive, and cost-effective. **Entry-level salary ranges: \$30,000 to \$40,000.**

Safety Director - manages job site safety by inspection, corrects safety hazards, manages worker's compensation and insurance claims, and ensures compliance with government regulations. **Entry-level salary ranges from: \$40,000 to \$50,000.**

- The most common occupation in the construction trade is **carpentry**, according to the Department of Labor, Bureau of Labor Statistics.
- In May 2005, there were **773,229 carpenters in construction**, earning an average annual salary of **\$39,270**.
- About one-third of all carpenters are self-employed.
- It is increasingly important for construction workers, particularly those in managerial positions, to be **bi-lingual**.



Apprenticeships



Apprenticeships are excellent ways to enter into high-paying careers in the trades. Apprenticeships allow entry-level workers to gain customized training, while being compensated. As their skill level develops, their salaries increase. A first year apprentice salary usually begins at 40% to 50% of a journey worker's hourly pay rate.

Apprentices work under the supervision of seasoned craft-workers. Additionally, they are required to attend related/supplemental classes so that they gain a thorough understanding of the theoretical and practical aspects of their desired trade area. Apprenticeship training is provided by Apprenticeship Sponsors, which can be a single employer, an association of employers and trade unions in both private and public sectors in various industries. The length of apprenticeship training can be from one (1) to five (5) years, depending on the trade or craft. All completers of apprenticeship training receive nationally recognized certificates.

Apprenticeable occupations exist in many industries, including construction, allied health, automobile, information technology, aerospace, retail, farming and many others. **The most available registered apprenticeship programs in the District of Columbia are in the construction industry, i.e. electricians, plumbers, carpenters, iron workers, steamfitters, and sheet metal workers, to name a few.** Other available trade positions outside the construction industry include pharmacy technician, photo-lab technician, automobile technician, cosmetology, stationary engineer childcare development specialist and elevator/escalator repairer.

All apprenticeship programs have eligibility requirements. For most apprenticeship programs, applicants must be at least 18 years old, have a high school diploma or GED, be physically able to perform the duties of the trade, and be drug free.

Pre-apprenticeship programs are available to District of Columbia residents during periods of the year through the Department of Employment Services' Office of Apprenticeship. These pre-apprenticeship programs, provided in partnership with apprenticeship sponsors, allow eligible participants to develop the necessary skills for their respective trade, while earning a stipend. Upon completion of the pre-apprenticeship training, individuals are guaranteed acceptance as registered apprentices. *For more information, call (202) 698-5099.*

Washington D.C. Building and Construction Trades Council (WBCTC)
5829 Allentown Road
Camp Springs, MD 20746
Phone: 301 899-8134
Fax: 301 899-8187

Insulators & Asbestos Workers #24
901 Montgomery Street
Laurel, MD 20707
Phone: 301 498-9162
Fax: 301 498-9163

Bricklayers & Allied Crafts #1
5879 Allentown Road
Camp Springs, MD 20746
Phone: 240 695-9463
Fax: 410 633-9054

Elevator Constructors #10
9600 Martin Luther King Highway
Lanham, MD 20706
Phone: 301 702-1010
Fax: 301 459-3991

International Brotherhood of Electrical Workers (IBEW) #26
4371 Parliament Place, Suite A
Lanham, MD 20706
Phone: 301 429-2575
Fax: 301 429-2574

Iron Workers #5
9110 Old Marlboro Pike
Upper Marlboro, MD 20772-3627
Phone: 301 599-0940
Fax: 301 599-5789

Laborers #657
4849 A Lydell Road
Cheverly, MD 20781
Phone: 301 772-8820
Fax: 301 772-8825

Operative Plasterers and Cement Mason Union (OPCU) #891
1517 Kenilworth Ave., N.E.
Washington, DC 20019
Phone: 202 398-5858 *63
Fax: 202 399-2733

Operating Engineers #77
2114 Fiddler Lane
Accokeek, MD 20607
Phone: 301 283-3476
Fax: 301 283-3499

Painters District Council #51
3900 James Street
Suitland, MD 20746
Phone: 301 420-0205 *67
Fax: 301 420-1309

Plumbers #5
8509 Ardwick- Ardmore Rd
Landover, MD 20785
Phone: 301 322-8810
Fax: 301 322-5363

Rodmen #201
1507 Rhode Island Ave., N.E.
Washington, DC 20018
Phone: 202 579-9151
Fax: 202 269-3694

Roofers #30
2008 Meritt Ave.
Baltimore, MD 21222
Phone: 410 247-0278
Fax: 215 331-8325

Sheetmetal Workers #100
4725 Silver Hill Road
Suitland, MD 20746
Phone: 301 568-8655 ext. 3
Fax: 301 568-8599

Sprinklerfitters #669
7050 Oakland Mills Road
Suite 100
Columbia, MD 21046
Phone: 410 312-5202
Fax: 301 621-6699

Steamfitters #602
8509 Ardwick- Ardmore Rd.
Landover, MD 20785
Phone: 301 341-1555
Fax: 301 386-3271

Teamsters #639
3100 Ames Place, N.E.
Washington, DC 20018
Phone: 202 636-8170
Fax: 202 529-9382

Other Trade Union Organizations

Joint Carpenter Apprenticeship Committee of Washington, D.C. and Vicinity
9109 Wesphalia Road
Upper Marlboro, Maryland 20774
Phone: 301 736-1696
Fax: 301 736-9789

Stationary Engineers #99
2461 Wisconsin Ave. N.W.
Washington, DC 20007
Phone: 202 337-0099
Fax: 202 625-7982

Washington Metropolitan Area Transit Authority (WMATA)
3500 Pennsy Drive
Landover, MD 20785
Phone: 301 618-1080

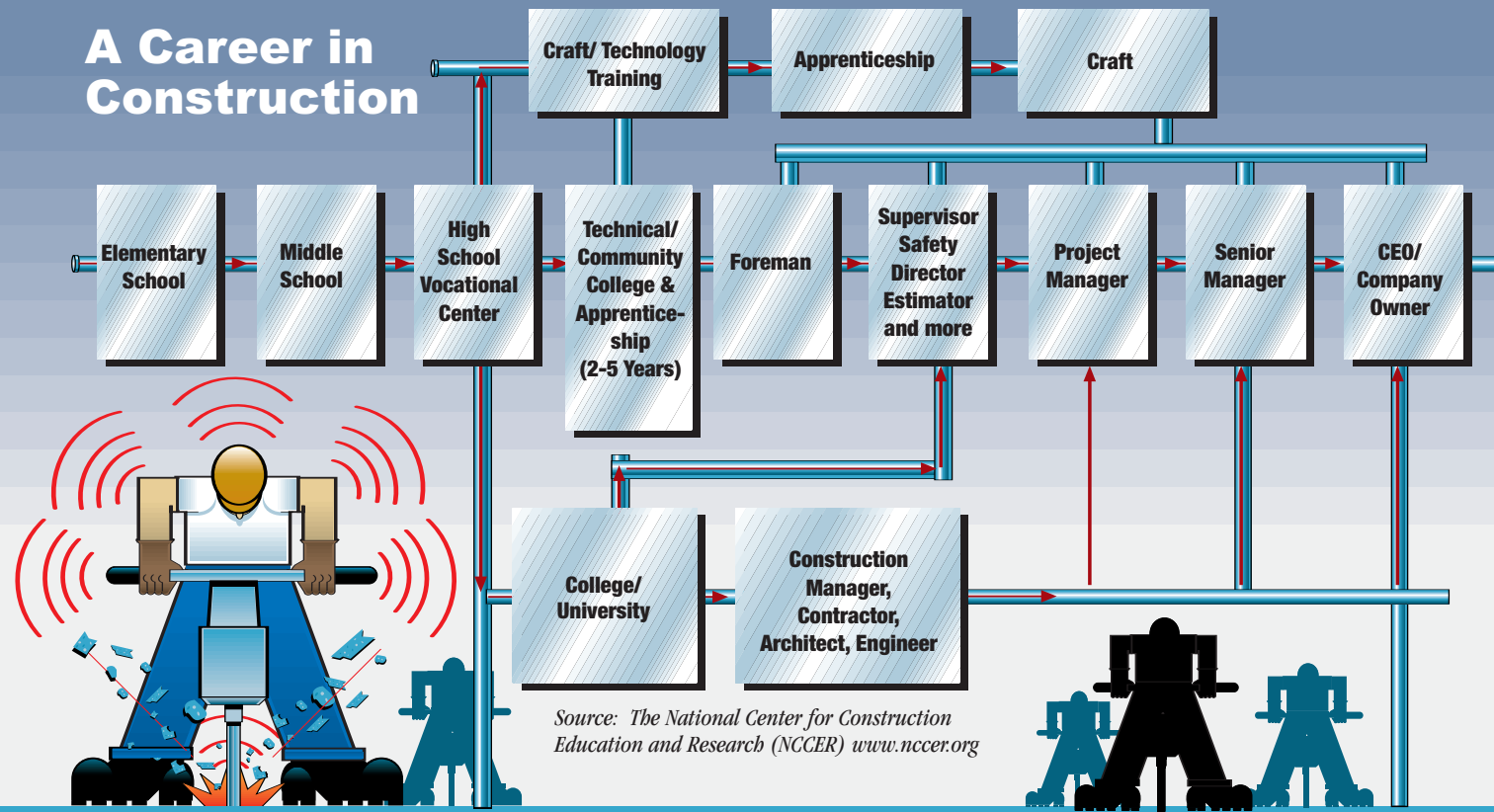
Top 10 Washington, D.C. Occupations in Construction of Buildings

Occupation	Skills / Training Needed	Mean Annual Wage
First-Line Supervisors / Managers of Construction Trades and Extraction Workers	High School diploma or less; on-the-job training	\$64,810
Electricians	Some college; formal apprenticeship training	\$53,950
Plumbers, Pipefitters, Steamfitters	Some college; formal apprenticeship training	\$48,330
Carpenters	High-school diploma; on-the-job training	\$42,670
Operating Engineers and Other Construction Equipment Operators	High-school diploma; some college; apprenticeship training	\$41,430
Industrial Truck and Tractor Operators	High-school diploma; on-the-job training	\$27,590
Construction Laborers	High-school diploma; on-the-job training	\$25,770
Laborers and Freight, Stock, and Material Movers, Handymen	High-school diploma; on-the-job training	\$25,500
Painters, Construction, and Maintenance	High-school diploma; on-the-job training	\$38,480
Welders, Cutters, Solderers, and Brazers	High-school diploma; on-the-job training	\$51,190

May 2005, Occupational Employment and Wage Estimates, U.S. Bureau of Labor Statistics



A Career in Construction



Source: The National Center for Construction Education and Research (NCCER) www.nccer.org

Active Apprenticeships

ACTIVE REGISTERED APPRENTICES

(Fiscal Year)	1999	2000	2001	2002	2003	2004	2005
Apprentices	1,108	2,041	2,371	3,183	3,521	3,711	4,300
Minorities	581	1,165	1,364	1,570	1,773	1,908	2,341
Females	56	122	134	146	145	154	194
District Residents	212	512	602	902	705	804	943

REGISTERED APPRENTICES IN MAJOR PROGRAMS

(Fiscal Year)	1999	2000	2001	2002	2003	2004	2005
Electrician	107	359	454	583	707	733	883
Carpenter	203	205	213	241	240	320	401
Steamfitter	109	193	271	360	426	458	529
Sheet Metal	117	137	205	258	271	318	297
Plumber	134	139	181	224	286	327	324
Iron Worker	121	172	186	175	146	170	164

ENROLLMENT IN PRE-APPRENTICESHIPS

	1999	2000	2001	2002	2003	2004	2005
	52	80	92	157	178	70	110

*Fiscal years are from October 1 to September 30.

The Perfect Resource for Your Employment Needs

Job Seekers interested in the Construction trades are encouraged to utilize any of the District's One-Stop Career Centers strategically located throughout the District of Columbia. Whether you are seeking information on up-coming job fairs, professional mentoring, or simply an access to a personal computer to help you with your career search/research, the District's One-Stop Career Centers have the offerings to help you get on your way.

Our Services

To Job Seekers		To Employers
<ul style="list-style-type: none"> ■ America's Job Bank ■ Assessment Services ■ Career Information ■ Case Management Services ■ D.C. Networks ■ Dislocated Workers Services ■ Job Search Workshops ■ Labor Market Information 	<ul style="list-style-type: none"> ■ One-Stop Career Center Orientation ■ Personal Computer Access ■ Resource Center ■ Senior Employment Services ■ Training Information ■ Unemployment Insurance Services ■ Veterans Employment Services 	<ul style="list-style-type: none"> ■ America's Talent Bank ■ D.C. Networks ■ Internet Access ■ Interviewing Facilities ■ Job Fairs ■ Job Listings ■ Labor Market Information ■ Recruitment Assistance ■ Tax Credit Information

One-Stop Career Center Locations

Full Service Centers

***Franklin Street One-Stop Career Center**
 1500 Franklin Street, N.E.
 Washington, D.C. 20001
 Hours: 8:30 am - 4:30 pm

***Naylor Road One-Stop Career Center**
 2626 Naylor Road, S.E.
 Washington, D.C. 20020
 Hours: 8:30 am - 4:30 pm

Satellite Offices

A. Philip Randolph Worker Center/ One-Stop Career Center
 6210 North Capitol Street, N.W.
 Washington, D.C. 20011
 Hours: 8:30 am - 4:30 pm

Business Improvement District (BID) One-Stop Career Center
 945 G Street, N.W.
 Washington, D.C. 20001
 Hours: 8:30 am - 4:30 pm


U.S. Assistance Center, Veteran Affairs Regional Office
 1722 I Street, N.W., 3rd Floor, Rm. 335
 Washington, D.C. 20421
 Hours: 8:30 am - 4:30 pm (Veterans Only)


Euclid Street One-Stop Career Center
 1704 Euclid Street, N.W.
 Washington, D.C. 20009
 Hours: 8:30 am - 4:30 pm

South Capitol One-Stop Career Center/ CVS pharmacy
 4049 South Capitol Street, S.W.
 Washington, D.C. 20032
 Hours: 8:30 am - 4:30 pm

* Unemployment compensation benefits can only be filed at these centers. Visit www.dcnetworks.org or call 202-724-7000 or 1-877-319-7346



 Government of the District of Columbia
Anthony A. Williams, Mayor

 Department of Employment Services
Gregory Irish, Director

Daryl G. Hardy, Assistant Director
Susan Gilbert, Associate Director/Business Services
Workforce Development Bureau
609 H Street, N.E.
Washington, D.C. 20002

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Notice of Non-Discrimination

In accordance with the D.C. Human Rights Act of 1977, as amended, D.C. Official Code Section 2-1401.01 et seq., (Act) the District of Columbia does not discriminate on the basis of actual or perceived: race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, familial status, family responsibilities, matriculation, political affiliation, disability, source of income, or place of residence or business. Sexual harassment is a form of sex discrimination which is prohibited by the Act. In addition, harassment based on any of the above protected categories is prohibited by the Act. Discrimination in violation of the Act will not be tolerated. Violators will be subject to disciplinary action.

The Department of Employment Services is an Equal Opportunity Employer/Provider. Auxiliary aids and services are available upon request to persons with disabilities.