



**Build On >>>**

**Careers in the Building and Construction Industry**

**APPRENTICESHIP  
TRAINING  
INFORMATION**



The Shell Pennsylvania Chemicals Project

## Build On >>>

### Careers in the Building and Construction Industry

#### Professional. Skill. Commitment. Pride.

These are among the hallmarks of the men and women of Western Pennsylvania's Union Construction Industry. You can join tens of thousands of professional craftspeople who have learned and honed their skills in one of our tuition-free apprenticeship programs. Not only is there no tuition, you'll be paid and receive health and pension benefits while in apprenticeship training.

An added benefit is that many of these programs allow you to earn up to 44 college credits towards an associate degree related to the construction industry – at no cost to you.

The opportunities to build a long-term, well compensated, and fulfilling career are virtually endless. Take the first step: Contact any of these Joint Apprentice Training Centers (JATCs) directly for more information on application and class schedules.

#### To apply, persons must:

- Be at least 18 years of age at the time their class begins;
- Have a high school diploma or GED (High School Seniors may apply prior to graduation);
- Have a valid Driver's License;
- Have reliable transportation; and
- Maintain a drug-free lifestyle.

The Builders Guild of Western Pennsylvania is a unique partnership of building trade unions and contractor associations working cooperatively to build and maintain a growing and dynamic building and construction industry in Western Pennsylvania. For more information on apprenticeships and our industry generally, please visit [www.buildersguild.org](http://www.buildersguild.org)





## BOILERMAKERS

LOCAL UNION #154 JATC

1221 Banksville Road

Pittsburgh, PA 15216

PH: 412-343-3072

[www.boilermakerslocal154.com](http://www.boilermakerslocal154.com)

Boilermakers Local Union #154 represents members in western Pennsylvania, two counties in Ohio and two counties in West Virginia.

The skills learned in training include: boiler making, welding, acetylene burning, asbestos abatement, chipping, caulking, reaming, fiberglass laminating, rigging, riveting, stack work, steel erection, tube rolling, and impact machine operating.

Boilermakers work on a variety of projects and work sites, including cement and fertilizer plants, water treatment facilities, breweries, steel mills, power plants, electric power generation plants, gas turbines, gas processing plants, refineries, pulp and paper mills, and other industrial and commercial facilities.

**CLASSROOM HOURS:** 576 (4-5 Years)

**HOURS ON-THE-JOB TRAINING:** 6,000 (4-5 Years)

### **Build On** ▶▶ **An Industry in Historic Growth**

The ten county Pittsburgh region and western Pennsylvania are experiencing the biggest construction boom in their history and it shows no signs of slowing. This boom provides life-changing opportunities for those interested in careers in the construction trades. From power plants, to office complexes and mixed-use facilities, the petrochemical and natural gas industries, health care and road and bridge infrastructure, there are billions of dollars being spent annually building out the region. This has created a great and growing need for skilled tradespeople – a career that pays family sustaining wages with excellent health care and pension benefits. You owe it to yourself and your family to investigate these amazing opportunities.



## **BRICKLAYERS & ALLIED CRAFTS**

**LOCAL UNION #9 JATC**

100 Kingston Drive  
Pittsburgh, PA 15235  
PH: 412-825-0923  
[www.local9pa.com](http://www.local9pa.com)

Bricklayers and Allied Crafts Local Union #9 represents tradespeople in the trowel trades across western Pennsylvania that include Bricklayers, Stone Masons, Marble Workers, Pointer-Cleaner-Caulkers, Tile Workers, and Terrazzo Workers.

**Bricklayers:** Build walls, partitions, arches, fireplaces, chimneys, and other structures from bricks, blocks, structural tile, and other pre-made materials.

**Stone Masons and Marble Workers:** Construct walls, partitions, arches, fireplaces, and other structures from natural and cultured stone and marble.

**Pointer-Cleaner-Caulkers:** Restore masonry buildings; reinstall mortar; replace bad caulking; clean and point masonry, stone, and brick surfaces.

**Tile Workers:** Working with ceramic tile or other natural and man-made tile products, these craftspeople build and restore walls, flooring, and other amenities in commercial and residential settings.

**Terrazzo Workers:** Often artistic work in nature, Terrazzo Workers build and install concrete or epoxy-based flooring, stairs, sidewalks, and driveways in hospitals, schools, and other commercial construction.

**CLASSROOM HOURS:** 576 (4 Years)

**HOURS ON-THE-JOB TRAINING:** 6,000 (4-5 Years)



## CARPENTERS

KEYSTONE+MOUNTAIN+LAKES  
REGIONAL COUNCIL OF CARPENTERS JATC

652 Ridge Road • Pittsburgh, PA 15205  
PH: 412-262-1830 • [www.kmlcarpenters.org](http://www.kmlcarpenters.org)

The Keystone+Mountain+Lakes Regional Council of Carpenters represents members across Pennsylvania, New Jersey, the District of Columbia, Virginia, West Virginia, Maryland, and parts of North Carolina. There are six certified apprenticeship programs available:

**Commercial Carpenters:** Construct, erect, install, and repair structures and fixtures of wood, plywood, metal studs, and wallboard. Among many other activities, they also erect framework in buildings, which include subflooring, partitions, and rafters. They also install molding, wood paneling, cabinets, windows, doors and hardware, and build stairs and forms for concrete work.

**Heavy Highway Carpenters:** Build and assemble forms for concrete structures such as bridges, retaining walls, tunnels, subways, drainage structures, hydro-electric developments, locks and dams, and sewage treatment projects.

**Floor Coverers:** Install all types of flooring materials, including carpet, sheet vinyl, tile, wood, and laminates, as well as materials for sports surfaces. They replace and repair floors in residential, commercial, and industrial settings.

**Mill Cabinet Workers:** Specialize in customized woodworking, designing and creating furniture, and fabricating and installing permanent fixtures from wood, including cabinets, moldings, door frames, and interior stairs.

**Millwrights:** Construction mechanics who install and maintain turbine systems, conveyor systems, and large machinery for factories and other industrial settings.

**Pile Drivers:** Build and maintain all types of piling and caissons, and specialize in foundations for buildings, dams, and bridges.

**CLASSROOM HOURS:** 576-880 (4 Years)

**HOURS ON-THE-JOB TRAINING:** 5,200 (4 Years)



## ELECTRICIANS

### IBEW LOCAL UNION #5 JATC

5 Hot Metal Street • Pittsburgh, PA 15203

PH: 412-432-1145

[www.ibewlocal5jadc.org](http://www.ibewlocal5jadc.org)

Local Union #5 of the International Brotherhood of Electrical Workers represents members in 22 counties of western Pennsylvania.

**Electricians:** Install, maintain, and test power, lighting, communications and other systems in commercial, industrial, and institutional buildings. They also install the power systems, lighting, and other components for some single-family, as well as large multi-family complexes. Electricians are also trained in instrumentation and the use of fiber optics.

**CLASSROOM HOURS:** 2,500 (5 Years)

**HOURS ON-THE-JOB TRAINING:** 10,000 (5 Years)

IBEW LOCAL UNION #712 also offers a joint apprenticeship training program for residents of Beaver, Lawrence, Mercer, and Crawford counties.

For information, call 724-775-6920 or visit us at [www.wcpaejadc.org](http://www.wcpaejadc.org).

### **Build On** ▶▶ **The Benefits of Being a Union Member**

The advantages of membership in a construction trade union are many. These advantages include wages, benefits, training, career advancement opportunities, safety, drug-free work sites, and protection of rights, to name a few.

On average, a union tradesperson in western Pennsylvania earns about 20 percent more than the average Pennsylvania state household income, which is just over \$55,000. Additionally, union members enjoy exemplary health benefits as well as retirement plans that are part of a fringe benefit package fully paid by contractors instead of out of pocket.

Beginning as an apprentice and throughout their career, members receive the latest



## **ELEVATOR CONSTRUCTORS**

### **LOCAL UNION #6 JATC**

2945 Banksville Road, Suite 208  
Pittsburgh, PA 15216  
PH: 412-341-6666  
[www.iuec.org](http://www.iuec.org)

Elevator Constructors Local Union #6 represents tradespersons across 26 counties in Pennsylvania, two counties in Ohio, and five counties in West Virginia. Elevator constructors install, repair, and maintain elevators, escalators, wheelchair lifts, home lifts, dumbwaiters, and movable walks.

**CLASSROOM HOURS:** 576 (4-5 Years)

**HOURS ON-THE-JOB TRAINING:** 8,000 (4-5 Years)

training in areas such as construction techniques, products, safety, and programs at no cost. This training is designed to help them grow their career into positions such as Foreman, Project Manager, Project Estimator, Apprentice Coordinator, Trainer and many others, or to start their own construction/contracting business.

Unions and union contractors work closely to ensure a drug-free work site and on safety issues striving to make every project accident free. A safe and drug-free workforce is a productive workforce and enhances the ability to complete projects ahead of schedule and on or under budget.

Trade unions represent your rights, negotiate fair and equitable compensation in wages and benefits with contracted increases, and ensure the safest and most responsible job sites and working conditions.



## INSULATORS

### LOCAL UNION #2 JATC

109 Pleasant Drive, Suite B  
Aliquippa, PA 15001  
PH: 724-788-1913  
[www.insulators2.org](http://www.insulators2.org)

The International Association of Heat and Frost Insulators and Allied Workers Local Union #2 represents members in 24 counties of western Pennsylvania, 15 counties in West Virginia, three counties in Ohio, and two in Maryland.

**Insulators:** Install insulation of both industrial and commercial mechanical systems for energy savings, burn protection, and to control temperature transfer and condensation. Other work includes cryogenic type insulation used in low temperature service, mirror insulation used in nuclear power generation, asbestos/lead abatement, and fire-stop installations.

**CLASSROOM HOURS:** 576 hours (4 Years)

**HOURS ON-THE-JOB TRAINING:** 6,000 (4 Years)

### **Build On** ▶▶ Career Success without College

We often hear people say college isn't for everybody! College, in fact, may not be for many when it comes to learning the skills and technologies necessary to build a long-term successful career in today's economy. But, education and training remain necessary, and that is where the apprenticeship programs offered by the region's 16 union construction trades and contractors come in.

Unlike college or for-profit technical schools, apprentice training is at no cost, it is paid for by the trade unions and contractors. In some trades, college credits or two-year degrees are earned at no cost, and apprentices are paid (as much as three times minimum wage in



# Iron Workers™

LOCAL UNION NO. 3



## IRON WORKERS LOCAL UNION #3 JATC

2315 Liberty Avenue  
Pittsburgh, PA 15222  
PH: 412-471-4535

[www.apprentice.iwlocal3.com](http://www.apprentice.iwlocal3.com)

Iron Workers Local Union #3 represents active members across all or parts of 16 counties in western Pennsylvania.

**Ironworkers:** Specialize in structural steel erection, pre-cast concrete construction, bridge erection/repair, ornamental iron/curtain wall installation, reinforcing steel placement and post-tensioning, pre-engineered metal buildings erection, welding, rigging/machinery moving, industrial construction, plant maintenance, and wind turbine construction.

**CLASSROOM HOURS:** 1,032 (3 Years)

**HOURS ON-THE-JOB TRAINING:** 4,200 (3 Years)

the first year) and receive health and pension benefits. Think of that – free education, an hourly rate equal to or greater than most college graduates, benefits, and no educational debt! A financial swing of hundreds of thousands of dollars.

There is some classroom learning, but apprentices spend most their training on the job site. Working daily with skilled journeypersons to build the infrastructure, office buildings, mixed-use developments, manufacturing and industrial facilities, power plants, and more that are critical to our region's continued growth.

The union construction trades offer truly sustainable and lucrative careers and foster a tremendous feeling of accomplishment and pride.



**LABORERS**  
**DISTRICT COUNCIL OF**  
**WESTERN PENNSYLVANIA JATC**

317 Deer Creek Road  
Saxonburg, PA 16056  
PH: 724-352-2224  
[www.laborpa.org](http://www.laborpa.org)

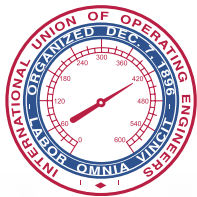
The Laborers' District Council of Western Pennsylvania represents workers across 33 counties in Pennsylvania.

**Laborers:** Are involved in almost every aspect of construction. They help to build and repair roads, highways, bridges, and tunnels; construct residential and commercial buildings; clean up hazardous waste sites; and perform many other types of work.

Other work performed includes, but is not limited to, building scaffolds; preparing and cleaning a job site; laying pipe; placing concrete; flagging and controlling traffic on highways; removing asbestos and lead from buildings; and constructing barriers to minimize or eliminate the spread of dust, allergens, or mold in rehabilitation and remodeling projects.

**CLASSROOM HOURS: 300 (3 Years)**

**HOURS ON-THE-JOB TRAINING: 4,000 (3 Years)**



## **OPERATING ENGINEERS**

**LOCAL UNION #66 JATC**

457 Christopher Road  
New Alexandria, PA 15670  
PH: 724-668-2244  
[www.wpaoperators.org](http://www.wpaoperators.org)

The International Union of Operating Engineers Local Union #66 represents heavy equipment operators and mechanics across 33 counties of Pennsylvania and three counties in Ohio.

**Operating Engineers:** Operate, maintain, and repair heavy construction equipment, such as cranes, backhoes, loaders, scrapers, and bulldozers for use in the construction of buildings, factories, roads, dams, power plants, pipelines, and bridges.

**Heavy Equipment Mechanics:** Maintain, troubleshoot, and perform repairs of various mechanical systems on a wide range of equipment, including everything from engines and transmissions on backhoes and bulldozers, to hydraulic and electrical systems on cranes and graders.

**RELATED TRAINING HOURS:** 800-920 (4 Years)

**HOURS ON-THE-JOB TRAINING:** 4,000-6,000 (4 Years)



## **OPERATIVE PLASTERERS AND CEMENT MASONS**

### **LOCAL UNION #526 JATC**

2606 California Avenue  
Pittsburgh, PA 15212  
PH: 412-761-6310  
[www.opcmia526.org](http://www.opcmia526.org)

Operative Plasterers and Cement Masons' Local Union #526 represents members in 33 counties in western Pennsylvania and five in northeastern Ohio.

**Cement Masons:** Smooth and finish exposed concrete surfaces on projects such as walls, floors, steps, sidewalks, driveways, and roads. The bulk of the work is in commercial and industrial building as well as in heavy highway construction.

**Plasterers:** Finish walls and ceilings using all types of interior and exterior products, such as conventional plaster, veneer plaster, spray fireproofing, spray foam insulation, and others.

**CEMENT MASON CLASSROOM HOURS:** 480 (3 Years)  
**HOURS ON-THE-JOB TRAINING:** 3,000 (3 Years)

**PLASTERER CLASSROOM HOURS:** 640 (4 Years)  
**HOURS ON-THE-JOB TRAINING:** 6,000 (6 Years)



## **PAINTERS, DRYWALL FINISHERS, GLAZIERS**

### **IUPAT DISTRICT COUNCIL #57 JATC**

101 Ewing Road  
Carnegie, PA 15106  
PH: 412-276-5758  
[www.ftiofwpa.com](http://www.ftiofwpa.com)

The International Union of Painters and Allied Trades (IUPAT) District Council #57 offers joint apprenticeship training in the crafts of painting, drywall finishing, and glazing. The Council covers 31 counties in Pennsylvania.

**Painters:** *Commercial Painters* perform surface preparation and apply a variety of protective coatings as well as ornate paint finishes and wall coverings. *Industrial Painters* work on projects such as bridges, large tanks, and other industrial settings, performing sand or water blasting preparation and industrial coating application.

**Drywall Finishers:** Seal joints between gypsum board and other wall board to prepare surfaces and ceilings for painting, wallpaper, and custom texturing.

**Glaziers:** Enclose buildings with curtainwalls, storefronts, windows, and entranceways. Glaziers also install skylights and perform interior work that includes mirrors, glass partitions, hollow metal frames, and architectural metal panels.

IUPAT District Council #57 also represents sign and display members who prepare, erect, and maintain all types of signs, along with their removal.

**CLASSROOM HOURS:** 432 for Commercial Painters; 480 for Drywall Finishers; 576 for Glaziers and Industrial Painters (3-4 Years)

**HOURS ON-THE-JOB TRAINING:** 6,000 for Painters and Drywall Finishers (3 Years); 8,000 for Glaziers (4 Years)



## **PLUMBERS**

### **LOCAL UNION #27 JATC**

1040 Montour West Industrial Park  
Coraopolis, PA 15108  
PH: 724-695-9047  
[www.ua27.org](http://www.ua27.org)

Plumbers Local Union #27 is a member of the United Association of Plumbers, Steamfitters, and Sprinkler Fitters covering all or parts of 15 counties in Pennsylvania.

**Plumbers:** Work in the heavy industrial, commercial, and residential sectors of the construction industry. From underground installation to final connections of fixtures and equipment, plumbers design, install, and maintain sanitary, storm, water supply and gas service lines, plumbing fixtures, mechanical equipment, and medical gas services. They also perform backflow and dye testing.

**CLASSROOM HOURS:** 1,200 (5 Years)

**HOURS ON-THE-JOB TRAINING:** 10,000 (5 Years)

**PLUMBERS & PIPEFITTERS LOCAL UNION #354** also offers a joint apprenticeship training program for interested persons who reside in all or parts of 14 counties in western/central Pennsylvania. For information, call 724-925-7238.



## ROOFERS LOCAL UNION #37 JATC

230 Lincoln Avenue • Bellevue, PA 15202  
PH: 412-732-9720  
[www.rooferslocal37.com](http://www.rooferslocal37.com)

Roofers Local Union #37 is a member of the United Union of Roofers, Waterproofers, and Allied Workers covering 20 counties in western Pennsylvania.

**Roofers and Waterproofers:** Install roofs on structures using a variety of materials, including shingles, slate and tile, hot tar, rubber, thermo-plastics, and composites. They also specialize in waterproofing and damp-proofing, as well as in lining industrial/commercial ponds and tanks, and the installation of air barriers.

**CLASSROOM HOURS:** 576 (4 Years)

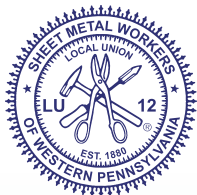
**HOURS ON-THE-JOB TRAINING:** 4,800 (4 Years)

### **Build On** ▶▶▶ **A Historic Training Program**

It may seem that the idea of apprenticeships is something new, but it is a tried and true method of training dating back thousands of years. In ancient Egypt and Babylon, training in craft skills was organized to maintain the number of needed craftsmen. The Code of Hammurabi of Babylon required artisans to teach their crafts to the next generation.

By the 13th century a similar practice emerged in western Europe in the form of craft guilds whose members supervised the product quality, methods of production, and work conditions for each occupational group in a town. Recruits entered the guild after completing training as an apprentice.

Today trade union apprenticeships are registered and regulated by both the federal and state governments and have very formalized training modules. But, just like thousands of years ago, a person needs to be accepted into an apprenticeship, committed to their craft, and then complete three to five years of classroom and on the job training before becoming a journeyman.



## **SHEET METAL WORKERS**

### **LOCAL UNION #12 JATC**

1200 Gulf Lab Road  
Pittsburgh, PA 15238  
PH: 412-828-1386  
[www.smlocal12.org](http://www.smlocal12.org)

Sheet Metal Workers' Local Union #12 is a member of the Sheet Metal-Air-Rail-Transportation International Association. It covers 23 counties in western Pennsylvania.

**Sheet Metal Workers:** Fabricate and install a multitude of products made from a variety of metals. Sheet metal workers fabricate anything from HVAC systems to architectural roof and cladding systems, industrial material handling systems, sign work, ornamental work, custom kitchen and food handling equipment, and other products and materials. They are skilled in all metal craftwork, including cutting, rolling, bending, mitering, welding, and soldering, as well as drafting, reading plans and specifications, and design.

**CLASSROOM HOURS:** 1,000 plus electives in training (4-5 Years)

**HOURS ON-THE-JOB TRAINING:** Up to 10,000 (4-5 Years)





## **SPRINKLER FITTERS**

**LOCAL UNION #542 JATC**

P.O. Box 58161 • 227 Stanton Avenue  
Pittsburgh, PA 15209  
PH: 412-822-8040  
[www.sprinklerfitters542.org](http://www.sprinklerfitters542.org)

Sprinkler Fitters Local Union #542 is a member of the United Association of Plumbers, Steamfitters, and Sprinkler Fitters covering Allegheny County and parts of several adjoining counties.

**Sprinkler Fitters:** Sprinkler fitters install, maintain, repair, and adjust all fire protection and fire control systems, as well as install and test backflow devices.

Work includes the installation of all piping or tubing, appurtenances, and related equipment, including both overhead and underground water mains, fire hydrants, and hydrant mains, standpiping, underground piping, and control systems in connection with, or part of, automatic sprinkler systems for the prevention and control of fire. They also install sprinkler tank heaters, air lines, and thermal systems, as well as all connected tanks and pumps.

**CLASSROOM HOURS:** 1,080 (4-5 Years)

**HOURS ON-THE-JOB TRAINING:** 10,000 (4-5 Years)

# Steamfitters

## STEAMFITTERS LOCAL UNION #449 JATC

230 Wise Road  
Harmony, PA 16037  
PH: 412-481-0333  
[www.ua449.com](http://www.ua449.com)

Steamfitters Local Union #449 is a member of the United Association of Plumbers, Steamfitters, and Sprinkler Fitters. Local 449 covers parts of 15 counties in western Pennsylvania.

**Steamfitters:** Fabricate, install, and service piping systems on job sites involving single-family and large-scale multi-family residential, large and small office buildings, supermarkets, food warehousing and processing facilities, power plants, chemical installations, factories, public buildings, and health care facilities. Their work involves process piping, steam – hot water, refrigeration, air conditioning, medical gas, boilers, pipe fabrication, hydraulics, controls, welding processes, HVACR service, energy management, rigging, drafting/ CAD drawing, and industrial instrumentation.

**CLASSROOM HOURS:** 1,250 (5 Years)

**HOURS ON-THE-JOB TRAINING:** 10,000 (5 Years)



## Pre-Apprenticeship Programs

***Introduction to the Construction Trades*** - This Pennsylvania registered pre-apprentice program is managed and partially funded by the Builders Guild of Western Pennsylvania with primary funding through Partner4Work. The program is administered in partnership with Pittsburgh Gateways Corporation.

Located at the Energy Innovation Center in Pittsburgh's Hill District neighborhood, the program aims to connect individuals of all backgrounds, including but not limited to those who are underserved, disadvantaged, underemployed, or unemployed to the extraordinary educational and career opportunities provided by the building and construction trades. Chief among those are family sustaining wages and benefits and the ability to continually advance to greater levels of responsibility.

This program facilitates career exploration through a combination of hands-on activities, virtual reality, career counseling, visits to Joint Apprenticeship Training Centers, and meeting professionals in various fields. Students are mentored to build job readiness and soft skills required to remain successful throughout their careers.

No previous skilled trade experience is needed. Program activities target two educational outcomes: basic job readiness and a wide exposure to a range of technical disciplines. Those who successfully complete and graduate from the program are "guaranteed" entry into one of the regional union apprenticeship programs offered by Builders Guild members.

For more information, contact Ms. Chaquita Barnett at [cbarnett@buildersguild.org](mailto:cbarnett@buildersguild.org) or 412-532-1733. To apply online go to [buildersguild.org](http://buildersguild.org) and click "Intro to the Trades".



***Breaking the Chains of Poverty*** - This career training program, endorsed and funded in part by the Builders Guild and administered by the A. Philip Randolph Institute's Pittsburgh Chapter, promotes living wage jobs and union membership for minorities.

Partnering with the labor movement and others, the program provides community-based training programs to educate, improve employment opportunities, and secure good union jobs that earn family-sustaining wages and benefits to create self-sufficient individuals and families.

Participants acquire state-of-the-art training, tools, and theory used by the building and construction industry and others as the core program consists of approved training modules that are industry driven and constantly enhanced by bringing new employers to the table.

Contact: **Breaking the Chains of Poverty, A. Philip Randolph Institute (APRI)**, 60 Blvd. of the Allies, Suite 200, Pittsburgh, PA 15222, 412-562-2432 or [www.pittsburghapri.org](http://www.pittsburghapri.org)

## Regional High School CTEs and CTCs

High School students across western Pennsylvania have an excellent opportunity to jump start their career skills training while in high school. The opportunity to attend a local CTE/CTC program will provide young men and women with an exploration of career skills that will assist them in building a successful career pathway into the skilled trades. The initial training at the CTE/CTC will build upon the initial STEAM skills that a student has developed in the traditional high school classroom through hands on applications of those skills in an authentic setting, solving real world problems. Students will be taught by educators that have developed their professional career skills in the Building and Construction Industry. Students will engage daily with skilled industry professionals as they learn for their future.

Today's CTE/CTCs are focused on providing award winning instruction that builds a student's confidence within a career pathway. Students learn the expectations of following detailed directions, both written and orally. Young men and women learn to work in a group as a team to accomplish assigned tasks of a project. They will also participate in career scenarios as employer and employee. The local career program is designed to provide each student with opportunities inside and outside of the classroom through job shadowing, internships, and industry tours to build their knowledge amongst the variety of career pathways offered in the Building and Construction Industry. Students and parents should become familiar with the 16 training and career apprentice programs offered by the Building and Construction Industry here in Western Pennsylvania.

**Future Road Builders** - A career awareness tool, created by the *Constructors Association of Western Pennsylvania*, uses games, videos,

imagery, and assessment tools to explore a virtual highway construction project and uncovers the skills needed to be a heavy and highway construction apprentice. This free app gives real insight into just what it means to be a construction professional. Download Future Road Builders today for free in any of the app stores.

**FUTURE  
ROAD BUILDERS**

More information on this app and a collection of other construction-related apps can be found in the Skill Arcade at [www.futureroadbuilders.com](http://www.futureroadbuilders.com). The site provides in-depth resources for students, parents, and facilitators, as well as detailed information about opportunities within the craft apprenticeship programs.

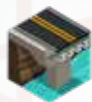


**Simcoach Games** is a Pittsburgh-based technology spin-out of Carnegie Mellon University, dedicated to creating video games that inspire and connect individuals to job opportunities. **simcoachGAMES**

Since 2005, Simcoach has partnered with industry leading organizations, including many in the construction industry, to produce free and engaging games that help players discover their aptitudes and interests. The Simcoach Skill Arcade is an innovative bridge that spans the gap between people with the skills to be successful in careers and the organizations that need them today and in the future.

The Simcoach Games mission is to create fun video games that inspire youth and connect them to relevant career paths which fit their unique interests and aptitudes. Whether educating a workforce, getting young professionals hired, or helping players discover their unique skills and aptitudes, Simcoach is committed to exposing next generation talent to promising career paths.

Simcoach Games have been developed in concert with Western Pennsylvania Construction Trade Unions and Contractor Associations:



**Future Road Builders** - Learn about the different phases of a highway construction project and uncover the skills needed to be a Carpenter, Pile Driver, Concrete Finisher, Skilled Laborer, Heavy Equipment Operator, and Inspector. (Constructors Association of Western PA)



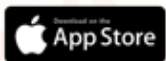
**Road Builder Blitz** - Quickly build bridges to learn about different careers involved in highway construction. (Constructors Association of Western PA, PennDOT, and FHWA)

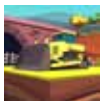


**Future Commercial Builders – Ground Up Construction** - Use your problem-solving skills to build a series of buildings while learning about the building trades, apprenticeships, and careers in the trades. (Master Builders Association of Western PA)

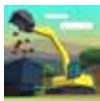


**Future Construction Inspectors** - Focus on the underlying skills needed to be an inspector on a road construction project. (PennDOT)





**Dig In: A Dozer Game** - Use your hand-eye coordination and spatial awareness to operate your dozer to perfection by digging trenches, pushing dirt, and filling holes in this fast-paced construction game. (IUOE Local 66)



**Dig In: An Excavator Game** - Use your hand-eye coordination and spatial awareness to build up your reputation as an expert excavator operator, completing simulated construction tasks! (IUOE Local 66)



**Hooked! A Tower Crane Game** - See what it takes to become a master crane operator by lifting loads around a construction site. (IUOE Local 66)



**Excavator Game** - As an excavator operator, use your skills in hand-eye coordination, three-dimensional thinking, and planning to solve these challenging digging puzzles! (IUOE Local 66 and Constructors Association of Western PA)



**Reinforcers** - Learn and practice the basic moves for three different types of rebar ties. Watch structures come together as you tie more rebar. (Laborers and Constructors Association of Western PA)



**Traffic Control** - Help traffic pass safely and avoid all the elements around your construction site. (Laborers and Constructors Association of Western PA)



**JobPro: Get Hired Construction** - While answering interview questions, the player is challenged with controlling their avatar – keeping them from nodding off, fidgeting, looking around the room, slouching, and more. Land the construction job by mastering the interview! (Constructors Association of Western PA)



**Harness Hero** - Reduce injuries and fatalities related to improper use of fall protection equipment by playing this game. (Master Builders Association of Western PA)



**Harness Hero: Bridge Edition** - As a spin-off of Harness Hero, this game educates players on the fundamental decisions of using a fall arrest system for bridge construction projects. (Constructors Association of Western PA)



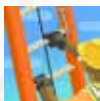
**ICRA For Construction** - As a carpenter on a healthcare construction site, you are challenged to identify safety hazards at a hospital. Find hazards that could potentially contaminate yourself and patients. (KML Carpenters and Master Builders Association of Western PA)



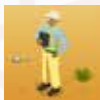
**Lift Coach: Plan Your Lift** - Players learn the importance of proper lifting posture to prevent future injuries and strains. (CPWR)



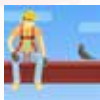
**Lift Coach: Plan Your Route** - Players are challenged with the task of properly moving construction materials on a job site safely to avoid injury. (CPWR)



**Site Coach: Ladder Safety Construction** - Players are challenged to investigate construction sites and practice identifying some of the most common hazards in ladder safety. The game features the following safety precautions: identification of ladder damage, use near fall hazards, secured ladders, placement of ladders in excavation, overhead power lines, selection of the right ladder, and so much more. (Master Builders Association of Western PA, Constructors Association of Western PA, AGC of America)



**Site Coach: Start Smart Construction** - Players investigate construction sites and practice identifying some of the most common hazards in building and highway construction. Some of the safety hazards include: ladder safety issues, scaffolding mishaps, struck-by hazards, and more. (Mosites, Master Builders Association of Western PA, Constructors Association of Western PA, Zurich)



**Site Coach: Fall Protection** - Players are challenged to investigate construction sites and practice identifying some of the most common hazards in fall protection. The game features the following safety precautions and identifying potential fall protection risks. (Master Builders Association of Western PA)



# Build On ▶▶

## Careers in the Building and Construction Industry

### SKILLED BUILDING TRADES CAREERS

<b>Boilermaker</b>	<b>Insulator</b>
<b>Bricklayer</b>	<b>Iron Worker</b>
• Stone Mason	<b>Laborer</b>
• Tile Setter	<b>Operating Engineer</b>
• Terrazzo Installer	• Heavy Equipment Mechanic
• Pointer-Cleaner-Caulker	
<b>Commercial Carpenter</b>	<b>Painter</b>
• Millwright	• Drywall Finisher
• Heavy Highway Carpenter	• Glazier
• Pile Driver	<b>Plumber</b>
• Mill Cabinet	<b>Roofer</b>
• Floor Covers	<b>Sheet Metal Worker</b>
<b>Cement Mason/Plasterer</b>	<b>Sprinkler Fitter</b>
<b>Electrician</b>	<b>Steamfitter</b>
<b>Elevator Constructor</b>	

### UNION CAREERS

Business Manager  
Dispatcher  
Foreman/Superintendent  
Union Representative  
Training Director  
Apprentice Instructor  
Legislative Representative  
Organizer  
Political Action Representative

Graduate from  
Traditional High School  
or CTC/CTE  
with credentials,  
then consider:  
**Union Trades  
APPRENTICESHIP  
OR APPRENTICESHIP  
with Two or Four Year  
College Degree**

### CONSTRUCTION CAREERS

Business Owner  
Civil Engineer  
Mechanical Engineer  
Electrical Engineer  
Construction Manager  
Executive Manager  
Estimator  
Field Representative  
Labor Relations Representative

### RELATED CAREERS AND INDUSTRIES

<b>Architect</b>	<b>Labor Attorney</b>
<b>Environmental Scientist</b>	<b>Construction Law</b>
<b>Gas Industry</b>	<b>Landscape Architect</b>
<b>Geologist</b>	<b>Manufacturing</b>
<b>Industrial Designer</b>	<b>Surveyor</b>
<b>Inspector</b>	<b>Urban Planner</b>
<b>Interior Designer</b>	<b>Utility/Energy Industry</b>



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