

Construction and Extraction

Construction Laborers

Construction Laborers perform a multitude of tasks ranging from the simple to the hazardous. Many of the jobs they perform require physical strength, training, and experience while other less intricate tasks can be learned quickly. Often referred to as construction workers they are an integral part of the work force on almost all construction sites. They can be found at building, highway, and heavy construction sites; residential and commercial sites; tunnel and shaft excavations; and demolition sites. While most construction laborers specialize in a type of construction, such as highway or tunnel construction, some are generalists who perform many different tasks during all stages of construction. Construction laborers who work in underground construction, such as in tunnels or in demolition are more likely to specialize in only those areas.

Their duties often begin with cleaning and preparing construction sites. They remove trees and debris; tend pumps, compressors, and generators; and erect and disassemble scaffolding and other temporary structures. They load, unload, identify, and distribute building materials to the appropriate location according to project plans and specifications. Laborers also tend machines; for example, they may use a portable mixer to mix concrete. They often assist or do preparatory work for other craft-workers, including carpenters, plasterers, operating engineers, and masons.

Construction laborers are responsible for the installation and maintenance of traffic control devices and patterns. At highway construction sites, this work may include clearing and preparing highway work zones and rights-of-way; installing traffic barricades, cones, and markers; and controlling the traffic passing near, in, and around work zones. Construction laborers dig trenches; install sewer, water, and storm drainpipes; and place concrete and asphalt on roads. Other highly specialized tasks include operating laser guidance equipment to place pipes; operating air, electric, and pneumatic drills; and transporting and setting explosives for the construction of tunnels, shafts, and roads. Some construction laborers duties may include helping with the removal of hazardous materials, such as asbestos, lead, or chemicals.

Construction laborers are required to operate a variety of equipment, including pavement breakers; jackhammers; earth tampers; concrete, mortar, and plaster mixers; electric and hydraulic boring machines; torches; small mechanical hoists; laser beam equipment; and surveying and measuring equipment. They may use computers and other high-tech input devices to control robotic pipe cutters and cleaners. To perform their jobs effectively, construction laborers must be familiar with the duties of other craft-workers and with the materials, tools, and machinery they use, as all of these workers work as part of a team, jointly carrying out assigned construction tasks.

The workday is spent on foot on different construction sites doing physically demanding labor in all types of weather. Hours are long and vary as weekends or overtime are sometimes necessary depending on what hours the client wants work on a construction site to be in progress. Some clients may not want the noise of construction during business hours.

Education/Training

How to Obtain:

Generally a High School Diploma or equivalent is needed as the job does not entail formal schooling. Most workers start by getting a job with a contractor who provides on-the-job training. Increasingly, construction laborers are finding work through temporary-help agencies that send laborers to construction sites for short-term work. Entry-level workers generally help more experienced workers, by performing routine tasks such as cleaning and preparing the worksite and unloading materials. When the opportunity arises, they learn from experienced construction trades' workers how to do more difficult tasks, such as operating tools and equipment. Construction laborers may choose, though it is rarely required, to attend a trade or vocational school, association training class, or community college to receive further trade-related training.

Some laborers receive more formal training in the form of an apprenticeship. Becoming an apprentice requires that the applicant be 18 years of age; have a high school diploma or GED; have a valid driver's license; and not be afraid of heights as Construction laborers often work on swinging scaffolding up to forty feet in the air. There are recognized apprenticeable specialties associated with this occupation, these are:

- Construction Craft Laborer- generalist who builds all-round skills such as digging trenches, erecting scaffolds, setting braces to support excavations and preparing construction sites.
- Tuckpointer- points grooved mortar joints with a thin ridge of fine lime mortar or putty
- Caulker- fills or seals to make pipes or other things watertight
- Pointer, Caulker Cleaner- caulks and seals joints in buildings and power-washes to clean buildings
- Maintenance Technician Municipal (Roadway Technician) - does skilled technical maintenance and repair work in the operation of municipal facilities.

At the end of an apprenticeship the laborer is automatically certified as a Journeyman and as such can earn higher wages. These apprenticeship programs include between 2 and 4 years of classroom and on-the-job training. In the first 200 hours, workers learn:

- Basic construction skills, such as blueprint reading or pipe laying.
- The correct use of tools and equipment and safety and health procedures.

The remainder of the curriculum consists of specialized skills training in three of the largest segments of the construction industry:

- Building construction
- Heavy and highway construction,
- And environmental remediation, such as lead or asbestos abatement and mold or hazardous waste remediation

In addition, Construction Laborers may pursue certification as a welder or concrete finisher or in scaffold erecting to improve their marketability and demonstrate they have a certain skill. Certification in any of these areas is available through short 8 -12 week programs from community and career colleges or vocational training organizations. Other organizations may just offer a practical exam whereby certification is granted after the skill is demonstrated. The Certified Welder program from the American Welding Society is a performance-based program with no prerequisite courses or certifications required. Final certification will provide "transferrable" credentials that can be taken anywhere. Upon completion of the examination an individual can contact their local licensing organization and apply for a welder's license. Requirements for most certifications include:

- Minimum 18 years of age
- English Language proficiency
- Completion of a certification exam
- A background check

Requirements for the concrete finisher certification include:

- Knowledge of basic concrete technology
- Knowledge of concrete materials and mix proportioning
- Passing an examination

Requirements for the scaffolding certification include the completion of safety classes which cover OSHA standards and regulations. Typical components of a certification program include:

- 4 hour user supported scaffold training
- 32 hour erector supported scaffold training

Training in "green," energy-efficient construction, an area of growth in the construction industry, is now available from many universities and can help workers find employment. Workers who use dangerous equipment or handle toxic chemicals usually receive specialized safety training. Laborers who remove hazardous materials are

required to take union- or employer-sponsored Occupational Safety and Health Administration safety training.

More Information on Certification:

- American Welding Society:
<http://www.aws.org/w/a/certification/index.html>
- American Concrete Institute:
http://www.concrete.org/certification/Cert_pgminfo.asp?pgm=Concrete+Flatwork+Finisher%2FTechnician#scope
- New York City Department of Buildings:
http://www.nyc.gov/html/dob/html/licenses/welder_license.shtml
- The Ironworker's National Welding Certification Program:
<http://www.ironworkers.org/organization/NationalWelding.aspx>
- Northwest Energy Education Institute:
<http://www.nweei.org/>
- The National Center for Construction Education and Research (NCCER):
<http://www.nccer.org/>

Average Costs:

Apprenticeship programs generally do not charge the apprentice for classroom instruction provided the apprentice maintains employment with a contractor affiliated with the apprenticeship program, throughout the apprenticeship period of 3 to 4 years.

Welding exams and licensing costs are between \$260 - \$900* plus the cost of any exam and study aids. A concrete finisher certification exam costs between \$195 and \$225. Other certification costs may vary.

*Note: Costs of license renewal vary.