Apprenticeship terms you need to know

Apprentice: An individual who is employed to learn an apprenticeable occupation and is registered with a sponsor in an approved apprenticeship program according to RCW 49.04 and these rules.

Apprenticeable occupation: A skilled trade(s) or craft(s), which has been recognized by the United States Department of Labor, Office of Apprenticeship, Training, Employer, and Labor Services or the WSATC and meets the criteria established in WAC 296-05.

Apprenticeship agreement: A written agreement between an apprentice and either the apprentice's employer(s), or an apprenticeship committee acting as agent for employer(s), containing the terms and conditions of the employment and training of the apprentice.

Apprenticeship committee: A quasi-public entity approved by the WSATC to perform apprenticeship and training services for employers and employees.

Apprenticeship program: A plan for administering an apprenticeship agreement(s). The plan must contain all terms and conditions for the qualification, recruitment, selection, employment and training of apprentices, including such matters as the requirement for a written apprenticeship agreement.

Apprenticeship Training, Employer and Labor Services (ATELS): Federal apprenticeship agency that oversees federal apprenticeship program registration and standard changes and approvals.

Approved: Approved by the WSATC or a person or entity authorized by the WSATC to do so.

CFR: The Code of Federal Regulations.

Cancellation: The termination of the registration or approval status of a program at the request of the supervisor or sponsor. Cancellation also refers to the termination of an apprenticeship agreement at the request of the apprentice, supervisor, or sponsor.

Certificate of completion: A record of the successful completion of a term of apprenticeship (see WAC 296-05-323).

Certification: Written approval by the WSATC of:

- **A set of apprenticeship** standards established by an apprenticeship program sponsor and substantially conforming to the standards established by the WSATC.
- **An individual as eligible** for probationary employment as an apprentice under a registered apprenticeship program.

Committee program: All apprenticeship programs as further described in WAC 296-05-309.

C**urrent instruction:** The related/supplemental instructional content is and remains reasonably consistent with the latest trade practices, improvements, and technical advances.

Department: The Department of Labor and Industries.

Employer: Any person or organization employing an apprentice whether or not such person or organization is a party to an apprenticeship agreement with the apprentice. "Employer" includes both union and open shop employers.

Individual agreement: A written agreement between an apprentice and/or trainee and either the apprentice's employer or an apprenticeship committee acting as agent for the employer.

Industry wide standards: The current, acceptable trade practices, including technological advancements that are being used in the different trades.

Joint: Indicates a program that is jointly sponsored by a group of employers and a labor organization with a collective bargaining agreement. It is administered by employer and employee representatives from an apprenticeship and training committee composed equally from management and labor.

Journey level: An individual who has sufficient skills and knowledge of a trade, craft, or occupation, either through formal apprenticeship training or through practical on-the-job work experience, to be recognized by a state or federal registration agency and/or an industry as being fully qualified to perform the work of the trade, craft, or occupation. Practical experience must be equal to or greater than the term of apprenticeship.

Non-joint: Indicates a program where there is no labor organization or collective bargaining agreement. It is sponsored by employer association(s) and administered by an apprenticeship committee composed equally from employer and employee representatives.

On-the-job training program: A program that is set up in the same manner as an apprenticeship program with any exceptions authorized by the WSATC and as further described in WAC 296-05-311.

Petitions, requests, and correspondence: Any written business brought before the WSATC (examples may include: (1) Requests for new committees (2) Requests for revisions to the standards; and (3) Appeals).

Plant: Indicates a program for a single physical location or a group of physical locations owned by the sponsor.

Prevailing Wage: The hourly wage, usual benefits and overtime, paid in the largest city in each county to the majority of workers, laborers, and mechanics. Prevailing wages are established by the Department of Labor and Industries for each trade and occupation employed in the performance of public work. They are established separately for each county and are reflective of local wage conditions. (RCW 31.12.010 and 015)

Probation:

- **Initial**: The period following the apprentice's acceptance into the program which is limited in time by these rules and during which the apprentice's appeal rights are impaired.
- **Disciplinary**: A time assessed when the apprentice's progress is not satisfactory. During this time the program sponsor may withhold periodic wage advancements, suspend or cancel the apprenticeship agreement, or take further disciplinary action. A disciplinary probation may only be assessed after the initial probation is completed. During the disciplinary probation, the apprentice has the right to file an appeal of the committee's action with the WSATC (as described in WAC 296-05-009).

RCW: The Revised Code of Washington.

Registration: Maintaining the records of apprenticeship and training agreements and of training standards.

Regular quarterly meeting: A public meeting held quarterly by the WSATC as described in WAC 296-05-200.

Related/supplemental instruction: Instruction approved by the program sponsor and taught by an instructor approved by the program sponsor. Instructors must be competent in their trade or occupation. A sponsor must review related/supplemental instruction annually to insure that it is relevant and current.

Relevant instruction: Related/supplemental instructional content that is directly required in and applicable to the performance of the apprentice's work. Relevant does not mean academic course content taught by a solely academically qualified instructor except for courses approved by the committee or specified by state law.

Secretary: The individual appointed by the director of the Department of Labor and Industries according to RCW 49.04.030.

Sponsor: Any person, firm, association, committee, or organization operating an apprenticeship and training program and in whose name the program is registered or is to be registered.

Standards: A written agreement containing specific provisions for operation and administration of the apprenticeship program and all terms and conditions for the qualifications, recruitment, selection, employment, and training of apprentices, as further defined in WAC 296-05-316.

Supervision: The necessary education, assistance, and control provided by a journey-level employee that is on the same job site at least 75 percent of each working day, unless otherwise approved by the WSATC.

Supervisor: The individual appointed by the director of the department according to RCW 49.04.030 who acts as the secretary of the WSATC. Where these rules indicate a duty of the supervisor or secretary of the WSATC, the supervisor may designate a Department of Labor and Industries' employee to assist in the performance of those duties subject to the supervisor's oversight and direction.

Trade: Any apprentice able occupation defined by the apprenticeship, training, employer and labor services section of the United States Department of Labor and these rules.

Trainee: An individual registered with the supervisor according to WAC 296-05-311.

Training agent: Employer of registered apprentices approved by the program sponsor to furnish on-the-job training to satisfy the approved apprenticeship program standards who agree to employ registered apprentices in

that work process. The training agent shall use only registered apprentices to perform the work processes of the approved program standards.

Training agreement: A written agreement between a training agent and a program sponsor that contains the provisions of the apprenticeship program applicable to the training agent and the duties of the training agent in providing on-the-job training.

WAC: The Washington Administrative Code.

WSATC: The Washington State Apprenticeship and Training Council. The Council has statutory and regulatory responsibility for governing apprenticeship and training programs in the state of Washington. (RCW 49.04 and WAC 296-05) The Council's primary function is to approve and register apprenticeship and training agreements. Persons or organizations desiring to institute an apprenticeship training program must first propose their committee and standards to conform to apprenticeship laws and regulations for consideration of approval by the Council.

NATURE OF THE WORK

Brickmasons, blockmasons, and stonemasons work in closely related trades creating attractive, durable surfaces and structures. The work varies in complexity, from laying a simple masonry walkway to installing an ornate exterior on a highrise building. *Brickmasons* and *blockmasons*—who often are called simply *bricklayers*—build and repair walls, floors, partitions, fireplaces, chimneys, and other structures with brick, precast masonry panels, concrete block, and other masonry materials. Some brickmasons specialize in installing firebrick linings in industrial furnaces. *Stonemasons* build stone walls, as well as set stone exteriors and floors. They work with two types of stone—natural cut stone, such as marble, granite, and limestone; and artificial stone made from concrete, marble chips, or other masonry materials. Stonemasons usually work on nonresidential structures, such as houses of worship, hotels, and office buildings, but they also work on residences.

When building a structure, brickmasons use 1 of 2 methods, either the corner lead or the corner pole. Using the corner lead method, they begin by constructing a pyramid of bricks at each corner—called a lead. After the corner leads are complete, less experienced brickmasons fill in the wall between the corners using a line from corner to corner to guide each course, or layer, of brick. Due to the precision needed, corner leads are time-consuming to erect and require the skills of experienced bricklayers.

Because of the expense associated with building corner leads, some brickmasons use corner poles, also called masonry guides that enable them to build an entire wall at the same time. They fasten the corner poles (posts) in a plumb position to define the wall line and stretch a line between them. This line serves as a guide for each course of brick. Brickmasons then spread a bed of mortar (a cement, lime, sand, and water mixture) with a trowel (a flat, bladed metal tool with a handle), place the brick on the mortar bed, and press and tap the brick into place. Depending on blueprint specifications, brickmasons either cut bricks with a hammer and chisel or saw them to fit around windows, doors, and other openings. Mortar joints are then finished with jointing tools for a sealed, neat, uniform appearance. Although brickmasons typically use steel supports, or lintels, at window and door openings, they sometimes build brick arches, which support and enhance the beauty of the brickwork.

Stonemasons often work from a set of drawings, in which each stone has been numbered for identification. Helpers may locate and carry these prenumbered stones to the masons. A derrick operator using a hoist may be needed to lift large stone pieces into place.

When building a stone wall, masons set the first course of stones into a shallow bed of mortar. They then align the stones with wedges, plumblines, and levels, and work them into position with a hard rubber mallet. Masons continue to build the wall by alternating layers of mortar and courses of stone. As the work progresses, masons remove the wedges, fill the joints between stones, and use a pointed metal tool, called a tuck pointer, to smooth the mortar to an attractive finish. To hold large stones in place, stonemasons attach brackets to the stone and weld or bolt these brackets to anchors in the wall. Finally, masons wash the stone with a cleansing solution to remove stains and dry mortar.

When setting stone floors, which often consist of large and heavy pieces of stone, masons first use a trowel to spread a layer of damp mortar over the surface to be covered. Using crowbars and hard rubber mallets for aligning and leveling, they then set the stone in the mortar bed. To finish, workers fill the joints and clean the stone slabs.

Masons use a special hammer and chisel to cut stone. They cut stone along the grain to make various shapes and sizes, and valuable pieces often are cut with a saw that has a diamond blade. Some masons specialize in setting marble, which, in many respects, is similar to setting large pieces of stone. Brickmasons and stonemasons also repair imperfections and cracks, and replace broken or missing masonry units in walls and floors.

Most nonresidential buildings now are built with walls made of concrete block, brick veneer, stone, granite, marble, tile, or glass. In the past, masons doing nonresidential interior work mainly built block partition walls and elevator shafts, but because many types of masonry and stone are used in the interiors of today's nonresidential structures, these workers now must be more versatile. For example, some brickmasons and blockmasons now install structural insulated wall panels and masonry accessories used in many highrise buildings.

Refractory masons are brickmasons who specialize in installing firebrick and refractory tile in high-temperature boilers, furnaces, cupolas, ladles, and soaking pits in industrial establishments. Most of these workers are employed in steel mills, where molten materials flow on refractory beds from furnaces to rolling machines.

WORKING CONDITIONS

Brickmasons, blockmasons, and stonemasons usually work outdoors, but in contrast to the past when work slowed down in the winter months, new processes and materials are allowing these masons to work in a greater variety of weather conditions. Masons stand, kneel, and bend for long periods and often have to lift heavy materials. Common hazards include injuries from tools and falls from scaffolds, but these can often be avoided when proper safety equipment is used and safety practices are followed.

TRAINING, OTHER QUALIFICATIONS, AND ADVANCEMENT]

Most brickmasons, blockmasons, and stonemasons pick up their skills informally, observing and learning from experienced workers. Many others receive training in vocational education schools or from industry-based programs that are common throughout the country. Another way to learn these skills is through an apprenticeship program, which generally provides the most thorough training. Knowledge of algebra, geometry, and mechanical drawing are important in this trade.

Individuals who learn the trade on the job usually start as helpers, laborers, or mason tenders. These workers carry materials, move scaffolds, and mix mortar. When the opportunity arises, they learn from experienced craftworkers how to spread mortar, lay brick and block, or set stone. As they gain experience, they make the transition to full-fledged craftworkers. The learning period on the job may last longer than if trained in an apprenticeship program. Industry-based training programs offered through construction companies usually last between 2 and 4 years.

Apprenticeships for brickmasons, blockmasons, and stonemasons usually are sponsored by local contractors, trade associations, or by local union-management committees. The apprenticeship program requires 3 years of on-the-job training, in addition to a minimum 144 hours of classroom instruction each year in subjects such as blueprint reading, mathematics, layout work, and sketching. Applicants for apprenticeships must be at least 17 years old and in good physical condition. A high school education is preferable with courses in mathematics, mechanical drawing, and shop helpful.

Apprentices often start by working with laborers, carrying materials, mixing mortar, and building scaffolds. This period generally lasts about a month and familiarizes the apprentice with job routines and materials. Next, apprentices learn to lay, align, and join brick and block. They may also learn on the job or before they are hired to work with stone and concrete, which enables them to work with more than one masonry material.

Bricklayers who work in nonresidential construction usually work for large contractors and receive well-rounded training—normally through apprenticeship in all phases of brick or stone work. Those who work in residential construction usually work primarily for small contractors and specialize in only one or two aspects of the job.

With additional training and experience, brickmasons, blockmasons, and stonemasons may become supervisors for masonry contractors. Some eventually become owners of businesses employing many workers and may spend most of their time as managers rather than as brickmasons, blockmasons, or stonemasons. Others move into closely related areas such as construction management or building inspection.

SIGNIFICANT POINTS

Job prospects are expected to be very good. Most entrants learn informally on the job, but apprenticeship programs provide the most thorough training. The work is usually outdoors and involves lifting heavy materials and working on scaffolds.

Career: **Bricklayers and Stonemasons**

The work of bricklayers and stonemasons ranges from the simplest garden wall to large buildings taking years to complete. In fact, cathedrals of stone -- with their vaults, arches, gargoyles, and columns -- have often provided work for generations of masons.

Masons must be very exact, following blueprints, taking accurate measurements, and making sure that their lines are straight, level, and plumb (vertical). Stonemasons use chisels and diamond-bladed saws to cut stone to the required size and shape.

Bricklayers and stonemasons usually work in crews to join bricks, stones, and other masonry materials with mortar, using hand and power tools.

Did You Know?
Working in nonresidential construction with a large contractor is your best chance to learn a wide range of skills and work with a variety of materials.

Are You Ready To...?
Lay out wall patterns or foundations
Align structures vertically and horizontally
Cut and shape stone
Mix mortar or grout
Use hand and power tools
Set heavy stones or bricks in place
Fill and finish joints between bricks or stones
Dig trenches for wall foundations
Work outside

It Helps to Be...
Physically strong and good with your hands. It also helps to be a good problem solver and able to work well by yourself and as part of a team.

Make High School Count
Get a good foundation in math. Take algebra and geometry, which will help you take precise measurements and make accurate calculations in your work later.
Pick up valuable skills in mechanical drawing and shop.
Learn communication skills in English. You'll be reading blueprints and safety warnings and following written instructions. You'll also need to know how to ask the right questions.

Did You Know?
Brick has a long history, stretching back at least 6,000 years and spanning the globe.

Outlook
Government economists expect average job growth for bricklayers and stonemasons, compared to job growth in other careers, through 2014. There will probably be more job openings than job hunters.

Keep in mind, however, that the construction industry rises and falls with the economy and, in many cases, the temperature. You may be unemployed during times of slow economic growth and poor weather.

Compensation
The average yearly salary for bricklayers in 2004 was $42,770, according to the U.S. Department of Labor. Stonemasons, on the other hand, earned only $37,280.

Keep in mind that apprentices start work at a half the salary earned by a journey-level worker. You can expect to receive raises throughout your training though, often every six months