

CARPENTERS TRAINING CENTERS PROVIDING VITAL BUILDING SKILLS

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Most people have looked up at a skyscraper, bridge or other building project and wondered who could have built it.

Structures begin in the imagination of an architect. They are developed by groups of investors, engineers and managers. But they are brought to life by building contractors with teams of skilled carpenters and other construction trades people. Since industrial arts has almost disappeared from the public schools, the only place left for a person to learn professional-level skills required for modern structures is in the training centers operated by joint labor/management trusts.

Carpenters who build these structures study four years as apprentices in classrooms and laboratories and, irreplaceably and uniquely, on the job under a skilled "master." Their classes are free, and they earn fair wages and fringe benefits on the job. As journeymen, they embark on a lifetime of continuing education for specialized qualifications and certifications, as well as to keep pace with ever changing construction technologies. These classes also are free, and union contractors even have the option of having leadership training and safety awareness classes brought to their places of business at flexible hours.

Several trades operate training centers, but carpentry is called the "master craft." Apprentices learn the historic and contemporary skills associated with construction, from hammer and saws to blueprint reading, layout, concrete work, structural framing, roofs, stairs and all types of interior and exterior finishes. In the classroom or yard, students lay foundations and build mock homes or erect office walls and scaffolding and do everything but pour the concrete for a freeway overpass. Then they tear the lab work down and go out to work on real structures under close supervision.

Carpentry involves many other skills as well. Millwrights are experts in the installation and maintenance of industrial equipment, machinery and instrumentation. At the Carpenters Apprenticeship Training Center in Pleasanton, millwright students take apart and reassemble a generator like those used in electric power plants. Pile drivers construct heavy foundations and are experts in marine construction such as docks, piers and bridges. Some are deep-sea divers. Other specialties include acoustical installers, scaffold erectors, shinglers, insulators and drywall/lathers. New technology includes locating foundations with the global positioning satellite system.

The Northern California Carpenters Training Centers, which are also located in Fairfield, Morgan Hill and Fresno, comprise 160,000 square feet of space and offer 138 units of study in 92 programs. They constitute a full-service training agency registered by the State of California. The training program's headquarters in Pleasanton opened in 1983 on eight acres and contracts

nationally to develop building curriculum. Videos, books and pamphlets are created and produced on-site and distributed free to students. During the 1980s when many high schools were gutting their wood and metal shops to make computer labs, the Carpenters recognized craft and computer as complementary functions. Consequently, the Pleasanton center has been fully computerized since 1984 and today also hosts a community college computer laboratory.

Illustrating the complexity of modern construction, the Pleasanton Training Center offers 58 different kinds of welding certifications, from exotic metals to heavy plate and pile driving. People working on the Bay Bridge train there and at a temporary training center near the tollbooths. They train on bridge plates measuring four feet by eight feet and three inches thick, and costing \$10,000 each. They also have for training purposes sections of steel piling 10 feet in diameter and three inches thick. The new bridge is going to have 180 of these steel pilings, each more than 300 feet long. Welding each joint requires 42 hours of continuous work.

Construction is tough, hard work. It has been likened to organized chaos. The people at a job site must be able to read plans, understand sequencing and anticipate what needs to be done next. They must know and follow strict safety procedures to avoid accidents and lower workers' comp costs.

Right along with tool skills and safety, carpenter apprentices learn responsibility and the meaning of a fair day's work for a fair day's pay. To better prepare individuals for a career as a carpenter, we are currently developing a pre-apprenticeship training program, a kind of boot camp with a focus on discipline and team building.

If you think this program sounds a bit like the military, you're absolutely right. The U.S. military is masterful at taking young people with a variety of educational experiences and successes and molding them into highly motivated and self-disciplined teams. Our master instructors see faces light up when students see how to transform theory into reality. Geometric calculations that may have seemed both impossible and irrelevant in high school suddenly become exciting and practical. From achievement comes pride. Teamwork builds a sense of belonging.

Some 3,400 people are currently enrolled in courses offered by the Carpenters Training Committee for Northern California at an annual cost of \$8 million. We'd like to increase this enrollment and welcome applicants.

This training represents a tremendous commitment by responsible contractors and union workers to both the construction industry and to our community and nation. It also represents tremendous value to building owners who see work done right the first time.

The superior skills available from professional craftsmen are something to consider if someone tells you he can get the job done by paying minimum wages and no benefits to people with little skill or experience.