



Architectural and Construction Occupational Pathways

Youth Apprenticeship

ARCHITECTURAL DRAFTING AND PLANNING

Youth apprentices develop the skills needed to read, edit, and create architectural drawings. In the second year, youth apprentices expand their skills in developing specific residential and/or commercial design pieces.

Length of Apprenticeship: One or two years

***Bridging**

CARPENTRY FUNDAMENTALS

Carpentry Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, and general worksite procedures. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two years

Bridges to Carpenter Registered Apprenticeship

ELECTRICAL FUNDAMENTALS

Electrical Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, and electrical worksite procedures. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two years

Bridges to Electrical Construction and Residential Wirer Registered Apprenticeships

HEAVY EQUIPMENT OPERATOR AND OPERATING ENGINEER

Heavy Equipment Operators and Operating Engineer youth apprentices learn fundamental construction skills for commercial and residential developments, dams, roadways, etc. They learn blueprint reading, site layout, working safely, and the operation of tools and equipment.

Length of Apprenticeship: One year

Bridges to Heavy Equipment Operator and Operating Engineer Registered Apprenticeship

MASONRY/CONCRETE FUNDAMENTALS

Masonry/Concrete Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, and general worksite procedures related to the masonry and

concrete fields. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two years

Bridges to Cement Mason and Concrete Finisher Registered Apprenticeship

MECHANICAL/HVAC FUNDAMENTALS

MECHANICAL/HVAC Fundamentals youth apprentices gain skills related to the use of construction safety, drawings and blueprints, materials, tools, and general worksite procedures. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One year

Bridges to Environmental Systems Technician Registered Apprenticeship

Bridges to Heating, Ventilating, and Air Conditioning Installation and Service Registered Apprenticeship

Bridges to Sheet Metal Worker-Commercial Registered Apprenticeship

Bridges to Sheet Metal Worker-Residential Registered Apprenticeship

PLUMBER/SPRINKLER FITTER FUNDAMENTALS

Plumber/Sprinkler Fitter Fundamentals youth apprentices gain skills related to the use of plumbing safety, drawings and blueprints, materials, tools, and general worksite procedures. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two years

Bridges to Automatic Fire Sprinkler Fitter Registered Apprenticeship

Bridges to Sprinkler Fitter Registered Apprenticeship

Key: *Bridging = Where an RA Bridge does not exist, one may be developed.

CONSTRUCTION EMPLOYMENT OF MINOR'S CONSIDERATIONS

Youth apprentices who are 16-17 years old can perform work tasks, *only after appropriate operation/safety training AND only as indicated below*. The **student learner exception** limits the minor to using hazardous equipment on an **incidental basis** (less than 5% of their work time) and only **occasionally** (the work cannot be a regular part of their job). Student Learner status does NOT override the Employment of Minor's Laws.

Driving

Minors under age 17 cannot drive as part of their job (based on October 1998 U.S. Dept. of Labor revision (98-464)).

A minor, age 17, may operate a motor vehicle as a part of employment if:

1. the vehicle does not exceed 6,000 pounds gross weight;
2. driving is done during daylight hours only;
3. the driving amounts to no more than 20% of the work week or 1/3 of the workday;
4. the student has attended drivers' education training and holds a valid driver's license;
5. the driving takes place within a 30-mile radius of the minor's place of employment;
6. the minor has no record of any moving violations at the time of hire; and
7. the driving does not involve: towing of vehicles, route deliveries or sales, transportation for hire, urgent time-sensitive deliveries, transporting more than 3 passengers who are employees of employer at one time.

Youth Apprentices under the age of 18 are prohibited from using the following pieces of equipment: aerial lift, compactor, forklift, and skid steer.

Confined Space (DWD 270.12(7)) -

- Minors cannot work in spaces that have limited openings for entry and egress, have unfavorable natural ventilation, or have dangerous air contaminants or produce dangerous air contaminants

Excavation Operation (270.12(9)) –

- Students may manually excavate or manually backfill trenches only if they do not exceed 4 feet in depth at any point or are working in trenches that do not exceed 4 feet in depth at any point.
- Students may manually excavate only if the depth does not exceed 4 feet below any ground surface adjoining the excavation, or the excavation does not exceed such depth, or the side walls are shored or sloped to the angle of repose.
- Students may work within tunnels only if all driving and shoring operations are complete.
- Student may work within shafts only if all sinking and shoring operations are complete.

Hoists and Hoisting Apparatus (DWD 270.12(12)) -

Students age 16 and 17 years old **can**:

- **operate** an automatic elevator and an automatic signal operation elevator under certain conditions. Refer to DWD 270.12(12)(b) for exceptions and definitions of the terms used in this section.

- **operate** floor jacks, hand jacks, drive on lifts, and arm lifts used in conjunction with repairing or servicing motor vehicles. They may also use air compressors, tire changers, truck tire changers and wheel balancers, as long as there are automatic safety features that lock vehicles to the lifts.

Students age 16 and 17 years old **cannot**:

- operate an elevator, crane, derrick, hoist, or high-lift truck (including hoists commonly used on tow trucks and other hoists), **except** operating an unattended automatic operation passenger elevator or an electric or air-operated hoist not exceeding one-ton capacity.
- perform work that involves riding on a man lift or on a freight elevator, **except** a freight elevator operated by an assigned operator.
- assist in the operation of a crane, derrick or hoist performed by crane hookers, crane chasers, hookers-on, riggers, rigger helpers and like occupations.

Roofing or on or About a Roof (DWD 270.12(24)) -

- Minors **cannot perform** roofing operations or on or about a roof.
- "*On or about a roof*" includes all work performed upon a roof, including carpentry and metal work, alterations, additions, maintenance, and repair, including painting and coating of existing roofs; the construction of the sheathing or base of roofs; gutter and downspout work; the installation and servicing of heating, ventilation and air conditioning equipment or similar appliances attached to roofs; and any similar work that is required to be performed upon or about roofs.

Saws and guillotine shears (270.12(25)) –

- Students may operate or assist on these types of machines only if they are equipped with automatic feed and ejection. All other types are considered hazardous. "*Machines equipped with full automatic feed and ejection*" means machines that are equipped with devices for full automatic feeding and ejection and with a fixed barrier guard to prevent completely the operator or helper from placing any part of his body in the point-of-operation area.
- Setting up, adjusting, repairing and cleaning is allowable provided the tasks are completed electronically OR in a manner so that the youth is not accessing sharp or moveable parts.

Welding (270.13(15)) -

- Students may do light or spot welding.

Woodworking Power-Driven Machine Use (DWD 270.12(27)) -

Minors **cannot operate** power-driven woodworking machines:

- Operator of power-driven woodworking machines, including supervising or controlling the operation of these machines, feeding material into these machines, and helping the operator to feed material into these machines **except** placing of material on a moving chain or in a hopper or slide for automatic feeding.

- "Power-driven woodworking machines" means all fixed or portable machines or tools driven by power and used or designed for cutting, shaping, forming, surfacing, nailing, stapling, wire stitching, fastening, or otherwise assembling, pressing, or printing wood or veneer.

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