



## HAWAII LABORERS' TRAINING & APPRENTICESHIP PROGRAM

CONSTRUCTION COURSE DESCRIPTIONS

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**COURSE TITLE: Advance Sewer & Drain Systems Phase I**

**COURSE HOURS:** 20

**PREREQUISITES:** 2 years of civil construction or equivalent.

**COURSE TOPICS:** Sewer and Drain Systems: use of an actual plan with specifications to cover sewer and drainage activities.

Trenching and Shoring: course includes the importance of soil identification, techniques for trenching for utilities and proper shoring installation.

**COURSE TITLE: Advance Sewer & Drain Systems Phase II**

**COURSE HOURS:** 20

**PREREQUISITES:** 2 years of civil construction or equivalent.

**COURSE TOPICS:** Grades and Elevations: understanding the importance and use of hub's and laths. Utilizing offsets from the surveyor's layout to install pipe and manholes.

Pipe Laser: understanding procedures and techniques for proper set up of a pipe laser. Course also includes obtaining information needed to plan for installation and recognizing hazards associated with lasers.

**COURSE TITLE: Advance Sewer & Drain Systems Phase III**

**COURSE HOURS:** 20

**PREREQUISITES:** 2 years of civil construction or equivalent.

**COURSE TOPICS:** Pressure Testing: ability to test gravity flow and pressurize line for leaks. Use of the mandrill to check alignment of pipe for specifications.

Confined Space: This course introduces participants to the hazards associated with confined spaces. Course includes OSHA definition of confined spaces, hazardous atmospheres, physical hazards, controlling the hazards, pre- entry testing, and entry team duties.

COURSE TITLE: **Advance Water Systems Phase I**

COURSE HOURS: 20

PREREQUISITES: 2 years of civil construction or equivalent.

COURSE TOPICS: Water Pipe Systems: use of an actual plan with specifications to cover water line activities in accordance with Board of Water Supply.  
Beveling and Cutting: straight, angle cuts and beveling techniques with a Target Saw for PVC and Ductile Iron pipe.

COURSE TITLE: **Advance Water Systems Phase II**

COURSE HOURS: 20

PREREQUISITES: 2 years of civil construction or equivalent.

COURSE TOPICS: Wrench Techniques: purpose and use of different types of wrenches. Identifying the proper torque for galvanized, brass and copper fittings.  
Copper Soldering: soldering various types of water laterals per Board of Water Supply standards.

COURSE TITLE: **Advance Water Systems Phase III**

COURSE HOURS: 20

PREREQUISITES: 2 years of civil construction or equivalent.

COURSE TOPICS: Top, Bottom Vertical / Siphon Installation: determining angles with the use of a template, utilizing formulas to calculate bends, prefabrication techniques and concrete jackets procedures.  
Connection of Water Mains/ Tie Ins: layout and preparation of various water line connections such as, tapping tees, live tie ins, and residential homes.

COURSE TITLE: **Aerial Boom Lift Operator/ Refresher**

COURSE HOURS: 4/ 3

PREREQUISITES: None

COURSE TOPICS: This course provides laborers with the understanding of operator safety, pre-start and post-start inspections, conditions that will affect the traveling and operating speed of a Aerial Boom Lift and factors that will affect the lifting force of a lift.

COURSE TITLE: **Air Tools & Gas Engines**

COURSE HOURS: 20

PREREQUISITES: None

COURSE TOPICS: This course teaches safe set up, operation maintenance of Pneumatic tools and tools with gas engines. Tools covered in this course are 90 lb breakers, chipping gun, rivet buster (Demo gun), all purpose saw (Target saw), grinder, generator, walk behind saws and jumping jack.

COURSE TITLE: **Asphalt Trench Patching**

COURSE HOURS: 14

PREREQUISITES: None

COURSE TOPICS: This course introduces participants to the must know the tools, equipment, crewmember responsibilities, and techniques involved in laying and repairing asphalt.

COURSE TITLE: **Backhoe Loader (Hoptoe)**

COURSE HOURS: 8

PREREQUISITES: None

COURSE TOPICS: This course provides participants with the understanding of operator safety, pre-start and post-start inspections, conditions that will affect the traveling and operating speed of a Backhoe and basic operator techniques.

COURSE TITLE: **Back Training, Physical Fitness & Nutrition**

COURSE HOURS: 3

PREREQUISITES: None

COURSE TOPICS: Participants will be given the basic knowledge on the importance of good nutrition and physical fitness. This course also includes how to deal with back injury if it occurs, how to prevent back injuries, and the right way to lift and shovel, on the job.

COURSE TITLE: **Basic Sewer, Drain, Streets & Roads**

COURSE HOURS: 40

PREREQUISITES: None

COURSE TOPICS: Participants will be given the necessary skills to understand the basics in sewer, drain, street and roadwork application. This course includes basic grading to pipe installation and backfill procedures. Standard and decimal system measurements, Where Does Our Sewer Go? Types of pipe, fittings, and couplings; Layout, grading and form setting; Hub and lath importance; Types of soil; Streets and roads dimensions; Drain systems.

COURSE TITLE: **Basic Water Pipe Systems**

COURSE HOURS: 40

PREREQUISITES: None

COURSE TOPICS: In this course, participants will be given the basic understanding of a complete water works project based on board of water supply standards. It includes locating existing utilities, pipe application, water laterals installation, fire hydrant connections and tying in to the existing water main. Standard and decimal system measurements, Where Does Our Water Come From? Traffic control and safety; Existing water main; Tapping tee, Valve and concrete block; Temporary & permanent cleanout; Single and double service laterals; Air relief valve: Types of bends, testing, chlorination, and closing procedures.

COURSE TITLE: **Concrete**

COURSE HOURS: 40

PREREQUISITES: None

COURSE TOPICS: This course covers pouring and placing of concrete required both by building and highway projects.  
Site Preparation, Foundation/footing, Job Built Forming, Estimating, Placement, Concrete vibration, Finishing and Curing

COURSE TITLE: **Confined Space Entry**

COURSE HOURS: 8

PREREQUISITES: None

COURSE TOPICS: OSHA definition of a permit required confined spaces, hazardous atmospheres, physical hazards, controlling the hazards, pre- entry testing, entry permit and entry team duties. Practical applications include confined space non- entry rescue technique; air monitoring, respirator protection, donning and doffing harness equipment.

COURSE TITLE: **Confines Space Awareness**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course introduces participants to the hazards associated with confined spaces. Course includes OSHA definition of confined spaces, hazardous atmospheres, physical hazards, controlling the hazards, pre- entry testing, and entry team duties.



COURSE TITLE: **Fall Protection**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course summarizes the key points of OSHA 1926 Subpart M (Fall Protection) and common OSHA citations related to fall protection. Practical applications include donning and doffing harness equipment.

COURSE TITLE: **Fire Watch**

COURSE HOURS: 2

PREREQUISITES: None

COURSE TOPICS: In this course participants will be able to identify the information described in a hot work permit. Course topics includes the three parts of the fire triangle; four classifications of fire; four classes of portable fire extinguishers and the information found on a fire extinguisher label and duties and responsibilities of a fire watch team.

COURSE TITLE: **First Aid/ CPR/ AED (National Safety Council)**

COURSE HOURS: 6

PREREQUISITES: None

COURSE TOPICS: This course includes breathing, cardiac emergencies in adults, infants and children; identifying and caring for bleeding, sudden illnesses, injuries; and preventing disease transmission. It also includes an introduction to AEDs. Participants practice CPR at the same time it's demonstrated on the video, taking their cues from the rescuer on the screen. VSI is shown to result in better CPR skills acquisition and retention than traditional teaching methods.

COURSE TITLE: **Flag Person, Traffic Control & Work Zone Safety**

COURSE HOURS: 6

PREREQUISITES: None

COURSE TOPICS: This course covers the basic flagging safety and procedures that include proper methods for stopping, releasing, and slowing traffic with both the paddle and the flag. It also explains why and how work-zone signs, cones, drums, and other devices are used on roadway maintenance and construction projects. It also includes work zone hazards that may occur when working around heavy equipment. This course covers the Manual on Uniform Traffic Control Devices (MUTCD) which is incorporated by reference to 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

COURSE TITLE: **General Construction Plan Reading**

COURSE HOURS: 20

PREREQUISITES: None

COURSE TOPICS: This course includes color coding and proper identification of items specified on a structural and civil plan. Participants will be introduced to formulas that can be utilized to calculate quantities such as aggregate, concrete and material.

COURSE TITLE: **Hazardous Waste Worker**

COURSE HOURS: 40

PREREQUISITES: None

COURSE TOPICS: This course covers practical application of work skills and PPE used in hazardous waste abatement work. This includes respirator fit testing & maintenance, the application and use of air purifying respirators and air supplying respirators, practical field task such as air sampling & monitoring, soil sampling, drum recovery/ repair and confined space entry.

COURSE TITLE: **Rigging & Signaling**

COURSE HOURS: 20

PREREQUISITES: None

COURSE TOPICS: This course covers basic methods in Rigging & Signaling. Crane awareness, sling configuration, rigging hardware and hand signaling are the main topics covered in this competency course.

COURSE TITLE: **Line & Grade**

COURSE HOURS: 14

PREREQUISITES: None

COURSE TOPICS: This course introduces participants to different methods in establishing alignment and elevation for various types of work in the construction field. The laborer will have the necessary skills to be efficient in working with the Eye Level, Philadelphia Grade Rod, Laser level and Pipe laser.

COURSE TITLE: **Mason Tending**

COURSE HOURS: 40

PREREQUISITES: None

COURSE TOPICS: This Course focuses on Mason Tending duties, including setting up the masons, keeping up a steady supply of mortar, keeping the work area clean, and shutting down the jobsite for the day. It also includes Scaffold builder, Scaffold user and Fall protection safety.

COURSE TITLE: **OSHA 10/ 30**

COURSE HOURS: 10/ 30

PREREQUISITES: None

COURSE TOPICS: The OSHA 10/30 class is a Department of Labor certified class, which covers introduction to 29 CFR 1926, OSHA Focus Four Hazards, (Fall Protection, Electrical, Struck By, Caught in/between) Personal Protective and Lifesaving Equipment, Health Hazards in Construction, Hazard Communication, Silica, Excavations, Stairways and Ladders safety. Confined Space Entry, Scaffolds, Fire Protection and Prevention, Materials Handling, Storage, Use and Disposal, Tools - Hand and Power, Welding and Cutting, Cranes, Derricks, Hoists, Elevators, and Conveyors, Protective Structures and Overhead Protection; and Signs, Signals and Barricades, Concrete and Masonry Construction and Ergonomics.

COURSE TITLE: **Respiratory Protection**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course focuses on the proper use of respirators. Course topics include types of respirators, of filters, protection factor and respirator program and fit testing.

COURSE TITLE: **Rough Terrain Fork Lift**

COURSE HOURS: 8

PREREQUISITES: Valid Drivers License

COURSE TOPICS: This course provides laborers the understanding of operator safety, pre-start and post-start inspections, conditions that will affect the traveling and operating speed of a fork lift and factors that will affect the lifting force of a forklift.

COURSE TITLE: **Scaffold Builder**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course complies with Federal and State OSHA standards for laborers who erect and dismantle scaffolding, access systems as well as other construction related systems.

COURSE TITLE: **Scaffold User**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course complies with Federal and State OSHA standards for laborers who work on scaffolds. This course covers loading, working on and under, and the occupational hazards associated with scaffolds.

COURSE TITLE: **Scissors Lift/ Man Lift Operator**

COURSE HOURS: 4

PREREQUISITES: None

COURSE TOPICS: This course provides laborers the understanding of operator safety, pre-start and post-start inspections, and conditions that will affect the traveling and lifting force of an aerial lift/ man lift.

COURSE TITLE: **Skid Steer (Bob Cat)**

COURSE HOURS: 8

PREREQUISITES: None

COURSE TOPICS: This course provides laborers the understanding of operator safety, pre-start and post-start inspections, and conditions that will affect the traveling, operating speed and basic operating techniques of a skid steer.

COURSE TITLE: **Trenching & Shoring**

COURSE HOURS: 8

PREREQUISITES: None

COURSE TOPICS: Course includes the importance of soil identification, techniques for trenching for utilities and proper shoring installation.