

# **ON-THE-JOB TRAINING PROGRAM**

## **PROJECT ENGINEER**



## OVERVIEW

The purpose of the OJT Program is to address the underrepresentation of minority, female, veteran and disadvantaged individuals in the highway construction trades.

By providing on-the-job training, the contractor will attract and retain more highly qualified employees and improve productivity and services.

### The goals of the

### OJT Program are:

- To offer equal opportunity for the training and upgrading of minorities, female, veteran and disadvantaged persons toward journey-level status in the highway construction trades.
- To improve the skills of the available workforce.

## PARTICIPANT RECRUITMENT

Contractors will review employment applications of prospective participants for work experience who will make desirable trainees. Contractors could obtain prospects who are interested in the OJT program through:

- Job fairs
- Existing employees
- Online Employment Resources
- ADOT BECO OJT Supportive Services Program

## ENTRANCE REQUIREMENTS

Applicants will meet the following minimum qualifications:

- The applicant must be a minimum of eighteen (18) years of age.
- The applicant must be physically capable of performing the essential functions of the OJT program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.
- Applicants are subject to random, post-accident and reasonable suspension drug testing per company policy.
- No applicant will be accepted as a trainee in any classification for which he/she has successfully completed, or in which he or she has been gainfully employed.

## EMPLOYEE ORIENTATION

Each trainee will receive an orientation by a Project Manager and/or Supervisor. These meetings will include the following:

- The trainee will receive a copy of this manual, which includes the specific training program he/she is completing.
- The starting wage rate and the graduated pay scale of the trainee enrolled in the training program.
- The seasonality of construction work and the adverse weather conditions under which work may occur.
- The necessity that construction workers are punctual and willing to work extra hours in order to remain steadily employed.
- From time to time, the trainee may have an obligation to perform tasks not included in the training program outline.
- Qualities or traits the company considers desirable in its workers, including work ethics.
- Ways in which employees can earn a promotion within the company.
- EEO policy, Affirmative Action Plan, Complaint and Unlawful Harassment policies.
- Appropriate PPE (i.e. hard hat, safety vest, work boots etc.) for the project shall be worn at all times in compliance with "Company Policy." Clothing should be applicable for the job environment.
- Basic hours of operation, overtime, weekend expectations.
- Whom the trainee will report to (primary supervisor); whom the trainee should call in case he/she will be tardy, absent from work or need to leave the worksite, specifically identifying the Company policies.
- Disciplinary procedures, termination, and layoff policies.
- Tool Box Talk participation.

## SUPERVISION

The trainee will be assigned to a journey worker, supervisor, or other knowledgeable employee who will, on a daily and personal basis, direct, review, and observe the trainee.

The allowable ratio of apprentices to journeyman is 1:1 ratio for the first trainee and one trainee for the next three journeymen at the same occupation.

## **RECORD KEEPING**

Contractor must complete a Trainee Enrollment form for each trainee. Contractor shall make all training records available for ADOT review upon request.

Training hours achieved on ADOT Federally funded projects shall be recorded in ADOT's online OJT reporting module within the ADOT DOORS System. Training hours achieved on non-federally funded ADOT Projects shall be recorded by contractor and made available for review upon request.

## **BENEFITS**

For employees subject to prevailing wages, the fringe benefits will be contributed into bona fide funds, plans or programs when applicable. Unless specified in union standards, fringes will be at the journeyman rate.

## **WORK HOURS**

The normal workweek is to consist of eight (8) hours per day, five (5) days per week, or that which the journeyman in the craft is working. Additionally, a trainee is eligible to work overtime if the opportunity is presented.

## **TERMINATION FOR JUST CAUSE**

The trainee may be terminated at any time during training. Some examples of reasons for termination are: absenteeism, lack of punctuality, accident-proneness, lack of interest, poor attitude, failure to demonstrate his/her ability to perform diligently and faithfully the work of the trade and other pertinent duties as assigned, or failure to conduct him/herself in a creditable, ethical, and moral manner.

As an employee, participation in the OJT program is not intended and does not constitute a contract of continued employment between the contractor and yourself. In addition, employment with the contractor is "at will" and that either the trainee or the employer may terminate employment at any time, and for any or no reason.

## **CERTIFICATE OF TRAINING PROGRAM COMPLETION**

At the completion of the training program, the trainee will receive a Certificate as a record of his/her accomplishment.

## **TEMPLATE ON THE JOB TRAINING CLASSIFICATIONS**

The OJT Program has been designed to provide training in the skilled construction trade classifications, and to ensure the Trainee consistently receives the level and quality of training necessary to perform in their respective skilled trade classification. The training classifications below and as outlined in the document have been approved by FHWA. Changes made to the content below will need to be submitted to ADOT for FHWA approval.

## PROJECT ENGINEER TRAINEE

6000 HOURS

Individuals will be trained to act in a supervisory capacity coordinating activities of work crews on highway and/or bridge construction projects. The trainee will learn:

- Company policies and procedures
- Jobs and personnel function to gain knowledge of all phases of highway/bridge construction tools and processes including:
  - ✓ Project Plans and Specifications;
  - ✓ Topographical Maps and Surveying;
  - ✓ Scheduling; and
  - ✓ Programs and Regulations Governing Construction Activities.

A typical training program under this classification will consist of the following (as a minimum):



### A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Hazard Communication Awareness

### B. Training

- EEO Policy
- AAP
- Sexual Harassment Training
- 30 Hour OSHA
- MSHA
- First-Aid/CPR
- SWPPP

- PPE
- Competent Person Trenching and Site Excavation
- Competent Person Fall Protection
- ATSSA Flagger Training
- ATSSA Supervisor Training
- Responsibilities:
  - ✓ Scheduling of all Flag Personnel
  - ✓ Employee Relations – Recognition and Motivation
  - ✓ Conflict Resolution
  - ✓ Public Relations
  - ✓ Safety and First-Aid
  - ✓ Weekly Project Audits
  - ✓ Tool Box Talks Meeting
  - ✓ Project Review of EEO Meeting
  - ✓ Job Hazard Analysis
  - ✓ Crew and Equipment Scheduling
  - ✓ Review Subcontractors Contracts
  - ✓ Review Subcontractors Insurance Certificates
  - ✓ Project Documentation (Weekly Time Sheets, Equipment Time, etc.)
  - ✓ Equipment/Material Usage and Maintenance
  - ✓ Recordkeeping
  - ✓ Review Plans and Specifications

- ✓ Statistical Safety Program
- ✓ Measuring Equipment Production
- ✓ Project Set-Up
- Job Knowledge:
  - ✓ Blueprint/Topographical Map/Layout Reading
  - ✓ Use of Transit
  - ✓ Planning and Layout of Field Office and Grounds
  - ✓ Layout and Staking
  - ✓ Site Preparation
  - ✓ Ground Condition Analysis and Testing
  - ✓ Excavation
  - ✓ Drainage
  - ✓ Pipe Culverts Planning and Installation
  - ✓ Sub-Grade Preparation
  - ✓ Fine Grading
  - ✓ Erosion Control
  - ✓ Placement of Paving - Concrete, Asphalt and Base Coarse
  - ✓ Job Site Cleanup
  - ✓ Traffic Control
  - ✓ Contractor Quality Control/Quality Assurance
  - ✓ Dust Control
- Form Building and Erection:
  - ✓ Basic Form Design
  - ✓ Construction Forms
  - ✓ Erection and Placement of Forms
  - ✓ Placement of Reinforcing Steel
- Structural Concrete:
  - ✓ Concrete Materials
  - ✓ Finishing Concrete – Pouring/Setting
  - ✓ Patching Concrete
  - ✓ Curing Concrete
  - ✓ Bidwell Operation
  - ✓ Form Work
  - ✓ False Work
  - ✓ Concrete Quality Control
- Stripping/Salvage:
  - ✓ Stacking Fundamentals
  - ✓ Removal/Clearing of Materials
- Concrete Demolition:
  - ✓ Removal/Clearing of Materials
  - ✓ Tools and Equipment
  - ✓ Methods of Removal
  - ✓ Protection of Surroundings
- Girder Erection:
  - ✓ Placement/Fastening/Securing
  - ✓ Exposure to Pile Driving, Welding, Cutting, and Minimum Heavy Equipment Operation
- Familiarization of Equipment:
  - ✓ Observation of Various Equipment
  - ✓ Understanding Basic Function and Preparation of Equipment
  - ✓ Understanding Use of Parts Catalog and Cost/Purchasing of Parts
  - ✓ Learning Key Parts Required
  - ✓ Learning Company Purchase, Receipts, Storage and Issuance Procedures
- Equipment Functions:
  - ✓ Tool Care, Storage and Transportation
  - ✓ Lubrication – Oil, Air and Fuel Filters, Grease Points – Inspection Techniques to Detect Abnormal Conditions
  - ✓ Welding and Burning Equipment and Operation of Lathes, Saws, Shapers, Grinders and Presses
  - ✓ Operation and Service of Fuel Systems
  - ✓ Hydraulic Systems
  - ✓ Electronic Systems
  - ✓ Equipment Operations
- Application of Equipment Training:
  - ✓ Preventive Maintenance – Shop and Field
  - ✓ Corrective Maintenance – Shop and Field
  - ✓ Order, Receive, and Store Tools and Equipment Under Supervision of Skilled Worker
  - ✓ Draw, Arrange, and Transport Tools and Materials Under Supervision of Skilled Worker
  - ✓ Participate in Equipment Preparation and Maintenance Under Supervision of Skilled Worker – Both in the Shop and Field Environments



- ✓ Use Tools of the Trade and Perform Related Duties as Required
- Traffic Signage:
  - ✓ Types of Equipment and Materials
  - ✓ Maintenance, Operation Limitations and Capabilities
  - ✓ Fueling, Lubricating and Servicing
  - ✓ Set-up
- Traffic Control:
  - ✓ Learning Company Policies and Procedures
  - ✓ Federal and State Regulations
  - ✓ Proper Hand and Sign Signaling
  - ✓ Public Relations
  - ✓ Recordkeeping
  - ✓ Knowledge of Proper Equipment and Safe Signing
  - ✓ Use of Radio Equipment
  - ✓ Control of Construction Equipment Through Work Area
  - ✓ Coordination of Activities with Proper Management and Supervisory Personnel
  - ✓ Daily Start-Up and Shut-Down Involving Safety Equipment
  - ✓ Maintenance of Adequate Level of Supplies for Daily Use
  - ✓ Placing Concrete Barriers
  - ✓ Safety and Operating Procedures
  - ✓ Topographical Map Reading
  - ✓ Planning and Layout Of Sign Packages
  - ✓ Excavating, Drainage, and Pipe Laying
  - ✓ Fence and Guardrail
  - ✓ Compaction and Backfilling
  - ✓ Fine Grading and Erosion Control
  - ✓ Placement of Hot Mix Asphalt and Hot Mix Asphalt Curb
  - ✓ Cold Planning and Reclaiming
  - ✓ Removal of Permanent Construction Signs and Job Site Clean-up
  - ✓ Temporary Pavement Markings

#### C. GENERAL CONSTRUCTION CLASSIFICATION

- Project Engineer

LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	FRINGE	=	_____	WAGES
LEVEL 2 – 2,000 HOURS @65%	_____	+	_____	FRINGE	=	_____	WAGES
LEVEL 3 – 3,000 HOURS @70%	_____	+	_____	FRINGE	=	_____	WAGES
LEVEL 4 – 4,000 HOURS @75%	_____	+	_____	FRINGE	=	_____	WAGES
LEVEL 5 – 5,000 HOURS @80%	_____	+	_____	FRINGE	=	_____	WAGES
LEVEL 6 – 6,000 HOURS @90%	_____	+	_____	FRINGE	=	_____	WAGES

**6,000 @ 100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED.**