



## JOB DESCRIPTION

<b><i>Title</i></b>	<b>Engineering Technician, Lead Worker</b>	<b><i>Created</i></b>	Feb. 2004
<b><i>Department</i></b>	Public Works	<b><i>Revised</i></b>	
<b><i>Job Class</i></b>	A 21 4	<b><i>Safety Sensitive</i></b>	Yes
<b><i>Labor Union</i></b>	AFSCME Local 2746 Courthouse/Roads	<b><i>FLSA</i></b>	Non-exempt

### ***Purpose***

To perform lead worker level engineering duties such as evaluating, planning, and directing survey, drafting, construction and bridge inspections, and technical support associated with road, bridge and related public works projects. Resolves difficult design and surveying problems using established policies and procedures, budgetary limits and nationally recognized engineering practices.

Employees within this class are distinguished from Engineering Technician II position by the performance of the full range of engineering duties and work assignments requiring a high degree of specialized knowledge, skills and certification. Employees at this level receive only occasional instruction or assistance from the County Engineer, and are fully aware of the operating procedures and policies of the department. This classification also differs from the Engineering Technician II position in that the Engineering Technician – Lead Worker acts as the representative of the County Engineer in his/her absence.

### ***Essential Functions***

- Collect, receive and review field survey data and preliminary designs for compliance with State and Federal design standards and perform engineering computations on survey data and horizontal and vertical alignments. Plot roadway cross-sections, calculate earthwork quantities and prepare preliminary estimates of construction materials required. Design engineering plans for projects such as overlays for county roads, widening and reconstruction of primary and secondary roads.
- Produce accurate alignment over predetermined course, establishing benchmarks and recording all field data such as cross-sections and topography, to be used in the design of transportation facilities. Operate and adjust transits, levels and photogrammetric and cadastral surveys. Research and write property descriptions. Monument and re-monument county right-of-way.
- Design complex transportation facilities and review or check details of designs prepared by others for completeness and compliance to Federal, State and local standards. Prepare permits, topographic maps, draft plans, cross sections, and other drawings; compute grades; coordinate and check horizontal and vertical alignments; compute quantities; prepare estimates.
- Oversee or perform standard physical and chemical tests on a variety of highway construction materials according to prescribed methods and standards. Receive and



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prepare samples for testing, maintaining records of samples received and test results. Conduct computations in connection with test results.

- Help develop and conduct research studies, analyze data and prepare routine reports for research projects and assist with training lower level engineering technicians.
- Direct the work of field survey and inspection crews on transportation construction projects, advising on details of work and design for conformance with departmental policies and procedures. Enforce contractor compliance to plans and specifications. Serve as project manager on selected projects.
- Serve as an inspector on all phases of road construction, such as grading, surfacing, asphalt, drainage; keep inspection records, write reports; assure conformance to standards and specifications.
- Conduct field traffic investigations for justification and placement of transportation signs, and speed zone changes. Prepare traffic investigation reports that comply with departmental, local and federal policies, procedures and regulations. Conduct highway inventories and road condition surveys.
- Provide technical traffic data for area transportation studies. Provide technical support at meetings with varied groups and governmental jurisdictions.
- Check, approve correct and assemble right of way property descriptions and assist in property acquisition. Prepare agreements for utility relocations. Check right of way plans for needed revisions and title sheets and transportation contract plans for accurate information. Assist utilities and State, Federal and city jurisdictions in difficult utility relocations. Provide support to other engineering technicians in the use of computers for engineering applications.
- Input data and assist in maintaining a database including bridge and road drawings and files. Use computer for CAD work, including drafting road projects and to input and receive data for various public works projects; use computer to store and summarize field data; maintain manual files on project status.

### ***Mandatory Qualifications***

E.I.T. or L.S.I.T. certificate. A Bachelor's degree in engineering or related field or a satisfactory equivalent combination of education, experience and training. Four (4) years of work experience in the field of engineering and/or surveying is required in addition to the above qualifications. Knowledge of mathematics and traffic/civil engineering or surveying principles. Possession of or ability to obtain a valid Oregon State Driver's license at time of appointment. Possession of or ability to obtain L.S. or P.E. within one year of hire.

### ***Desired Qualifications***

Knowledge of materials used in bridges and roads. Knowledge of pertinent Federal, State and local laws, codes and regulations.

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## ***Physical Demands***

Duties consist of physically demanding manual work up to 50% of time, typically requiring movement of materials weighing between 20-40 pounds and up to 100 pounds.

## ***Working Conditions***

Work in an office setting as well as performing field work in all types of weather; lifting, bending and walking and occasionally lifting heavy equipment over uneven slippery terrain. Exposure to heavy traffic, fumes, noise and oil.

## ***Supervisory Responsibility***

This position will act as lead worker and project manager on selected projects; assign duties, provide direction and advice, consult on complex problems, provide training and help resolve disagreements. This position will also provide occasional functional and technical supervision over two (2) and seldom over ten (10) persons.

THE ABOVE DESCRIPTION COVERS THE MOST SIGNIFICANT DUTIES PERFORMED BUT DOES NOT INCLUDE OTHER OCCASIONAL WORK, THE INCLUSION OF WHICH WOULD BE IN CONFORMITY WITH THE FACTOR DEGREES ASSIGNED TO THIS JOB.