

Oro Loma Sanitary District  
2655 Grant Avenue  
San Lorenzo, CA 94580  
(510) 276-4700

## **JUNIOR ENGINEER**

### **DEFINITION**

Under general supervision of the District Engineer, performs professional engineering work in the design, investigation, and construction of wastewater and related projects; to act as project manager in assigned projects, and to do related work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the journey level class in the professional engineering series not requiring registration. Incumbents of this class perform moderately difficult professional engineering work.

### **SUPERVISION EXERCISED**

None

### **IMPORTANT AND ESSENTIAL DUTIES**

1. Design and prepare plans and specifications and cost estimates for District projects including lift stations, sewer mains, and related projects.
2. Drafting using AutoCad or hand drafting.
3. Research project design requirements; perform complex calculations and prepare estimates of time and material costs.
4. Review field projects being studied, designed or constructed.
5. Inspect all phases of construction of District development projects.
6. Inspect various structures such as sewer mains, lift stations, and other construction; check line, grade, size, elevation and location of structures for conformance with plans, specifications and regulations.
7. Investigate field problems affecting property owners, contractors, and maintenance operations.
8. Estimate engineering and construction costs; write bid specifications.
9. Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.
10. Research publications and industry information sources to remain current with modern developments, principles and procedures.
11. Design and maintain spreadsheets and databases on personal computers.

12. Administer and enforce District codes and ordinances.
13. Prepare applications for State and Federal grants.
14. Prepare engineering studies and reports.
15. Perform related duties and responsibilities as required.
16. Participate in flow monitoring activities.

## **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

### **Knowledge of:**

- Engineering design theory, principles and practices.
- Methods of researching, current literature, and sources of information regarding engineering.
- Principles and practices of civil engineering as applied to wastewater engineering.
- Methods, materials and techniques used in the construction of wastewater projects.
- Principles and practices of program development, project scheduling and management.

### **Skill to:**

- Operate modern office equipment including computer equipment and generate work product using AutoCad, Word, Excel, and Windows software.
- Make complex engineering computations and prepare engineering plans, studies, profiles and maps.
- Operate a motor vehicle safely.

### **Ability to:**

- Communicate clearly and concisely, both orally and in writing.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.
- Interpret and apply Federal, State and local policies, procedures, laws and regulations.
- Manage small projects to completion within scheduled deadlines.
- Independently schedule and manage projects.
- Meet respiratory requirements and use self-contained breathing apparatus (SCBA) when necessary in accordance with the District's Standard Procedure.

### **Experience and Training Guidelines:**

*Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

#### **Experience:**

One year of professional civil engineering experience; experience may include volunteer work or an internship.

#### **Training:**

Bachelor's degree from an accredited college or university with major coursework in civil engineering or a closely related field.

**License or Certificate:**

Possession of a valid California driver's license, and a motor vehicle record which meets the District's driving record.

**Special Requirements:**

*Essential duties require the following physical abilities and work environment:*

The physical demands and work environment described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to work in a standard office environment and must be able to sit, walk, squat, reach and twist; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, squat or crawl; and talk or hear. Climbing may involve tall ladders, scaffolds, steep stairways, open ditches and deep manholes. The employee must be able to lift and/or move up to 50 pounds occasionally. Specific vision abilities required by this job include close vision, distance vision, depth perception, and ability to adjust focus. Additionally, the employee is occasionally exposed to outside weather conditions, entry into confined spaces, electrical hazards, and mechanical hazards, use of ladders or platforms, and walking on uneven terrain, gravel, or mud. The noise level when working in the field is usually loud, and the employee may be exposed to fumes, noxious odors and pathogenic substances.

**Effective Date:** May 2016