



SENIOR ENGINEERING TECHNICIAN - PLS/PE

Class Code:
97437

Bargaining Unit: LIUNA - Inspections & Technical

COUNTY OF RIVERSIDE
Established Date: Mar 1, 2000
Revision Date: Jul 21, 2016

SALARY RANGE

\$26.97 - \$47.23 Hourly
\$4,675.56 - \$8,185.70 Monthly
\$56,106.75 - \$98,228.42 Annually

CLASS CONCEPT:

Under general supervision, performs complex sub-professional civil engineering or land surveying work of a technically specialized nature in connection with planning, grading and drainage design, computer graphics, traffic, materials testing, environmental monitoring, hydrology, surveying, permits, or construction inspection activities; and performs other related duties as required.

The Senior Engineering Technician - PLS/PE is the advanced journey level of engineering technician and the journey level class of construction inspection. The Senior Engineering Technician is distinguished from the next lower level of Engineering Technician II in that the former is responsible for the more complex assignments, a higher degree of technical proficiency, and a wider exercise of initiative and independent judgment within defined technical and procedural limits. Construction inspection duties include responsibility for a wide variety of public works projects and subdivision tracts with considerable complexity and may include serving as assistant resident inspector. Supervision of subordinate personnel is common but not required.

REPRESENTATION UNIT:

LIUNA - Inspections & Technical

EXAMPLES OF ESSENTIAL DUTIES:

(Depending on the area of assignment, duties may include, but are not limited to, the following)
ENGINEERING:

- Draft plans, profiles, cross-sections, projections, and details and alignments for road construction, flood control and waste management projects; illustrate complex data in precise drawings using manual or computer aided design and drafting techniques.
- Design channels, roadways, and appurtenant structures within established limits, standards, and procedures.
- Participate in the planning, design and construction of solid waste landfill expansion, closure and operations projects.
- Review or prepare maps, plans, construction schedules, cost and quantity estimates, records of survey, and other documents; check engineering computations and specifications for accuracy, legality, and conformity to standards.
- Make land use and traffic projection studies and supervise others in the collection and analysis of data.
- Participate in and supervise others in the preparation of computer aided graphics and maps, including GIS and Microstation/AutoCad software; participate in the development of plans and specifications for public works projects.
- Check and process encroachment permit applications and issue permits.
- Perform field inspections to ensure compliance with permit conditions, project documents, County standards and regulatory requirements.

WASTE DISPOSAL: Under direction of a Principal Engineering Technician or Supervising Engineer:

- Initiate technical reports on solid waste landfill sites, including availability of cover material, expected life, effect of run-off, access, and ecological impact.
- Perform and direct sampling, inspection, monitoring and construction of gas collection systems, including flare stations and gas-to-energy systems, and ground/surface water monitoring systems at landfill sites; also perform and direct air quality sampling.
- Assist Site Supervisor/Site Engineer in investigating and handling complaints arising out of disposal site operation.
- Perform daily site inspection of active landfill sites to ensure all permit and safety requirements are being met; assist the Site Engineer in survey support of daily landfill construction.
- Assist in construction inspection for public works construction projects.

HYDROLOGY:

- Coordinate the construction, installation, maintenance, and operation of climatic and hydraulic measuring devices and instrument shelters.
- Direct the measurement and sampling of wells and streams for water quality.
- Direct the operation and maintenance of flood warning radio telemetry stations.
- Analyze rainfall records for intensity, duration, and time-period isohyets and construct groundwater contour maps.
- Maintain rain recording gauges; prepare and review various reports and correspondence pertaining to hydrologic and climatologic matters.
- Maintain accurate records on all data collected.
- Provide public and private agencies with basic climatological and hydrological data.

CONSTRUCTION INSPECTION:

- Inspect construction of storm drains, pipelines, levees, channels, bridges, and other steel and concrete structures; inspect paving of various types; inspect concrete and bituminous materials at batching plants; inspect the installation of geosynthetic liner systems at solid waste landfill sites; create and file daily construction reports and associated documentation.
- Inspect the installation and maintenance of traffic control devices, trench excavation and shoring/bracing, and other construction site practices and appurtenances for compliance with safety laws and safe practices.
- Inspect installation of concrete forms and placing and finishing of concrete and check structures adjacent to excavations for settlement or lateral movement of earth.
- Collect materials samples for testing and keep material and inspection records.
- May serve as assistant resident inspector on large construction projects or may act as resident inspector for small projects.
- Use and supervise the use and operation of various testing devices.
- Specify concrete mixes and aggregate gradings; confer with contractors and builders to ensure compliance with requirements and specifications.
- Prepare soil survey reports for project planning and design purposes.

SURVEYING:

- Perform complex sub-professional survey work of a technically specialized nature in connection with surveying, and the checking and preparation of records of surveys, corner records, maps and plans.
- Lead and participate in the operation of a field survey crew engaged in performing control, photogrammetric,

right-of-way, centerline, topographic, alignment, and elevation surveys.

- Adjust and operates such survey instruments as transits, theodolites, levels, and electronic measuring devices in determining lines, angles, distances, and elevations, and maintain proper safety and accuracy standards.
- May assume duties of a Principal Engineering Technician during leaves and vacations.
- In an office setting, review and check tract maps, parcel maps, records of survey, and corner records for mathematical accuracy, closure, area, survey consistency, and conformity with the requirement of the Land Surveyors Act and Subdivision Map Act, local ordinances, and accepted survey practices.
- Draft complex legal descriptions, easements, right-of-way maps, and survey plats, making necessary revisions and checking related computations for accuracy.
- Consult with office or field surveyors relative to special survey problems and calculations.
- As lead worker, participate in the evaluation of subordinates.

RECRUITING GUIDELINES:

OPTION I

Experience: Four years of sub-professional civil engineering experience, at least one year of which must have been at a level equivalent to a County of Riverside Engineering Technician II. (College courses from an accredited college or university in civil engineering or closely related subjects such as land surveying, soils erosion, soils testing, blueprint reading, mathematics, computer graphics, or hydrology may be substituted for up to two years of the non-specialized experience on the basis of 12 semester or 18 quarter units equaling one year of experience.)

OPTION II

Education: A Bachelor's degree from an accredited college or university in surveying engineering or civil engineering.

AND

Experience: One year of sub-professional engineering experience equivalent to a County of Riverside Engineering Technician II.

Knowledge of: Engineering principles, practices, mathematics, and construction materials and methods; manual and automated drafting techniques; use of hydrologic devices; boundary control and legal principles of land surveying; construction, photogrammetric, and land surveying procedures, practices, and equipment.

Ability to: Make difficult mathematical computations and to read, interpret, prepare, or check detailed records of surveys, maps, and engineering plans; test and inspect construction work and test construction materials; perform survey field work, coordinate computer aided mapping activities; complete difficult technical assignments without immediate supervision; analyze complex data and prepare effective reports and recommendations; supervise the work of subordinates; establish and maintain effective working relationships with others.

OTHER REQUIREMENTS:

License/Certificate: Possession of a valid and current Professional Land Surveyor License or Civil Engineer's License issued by the State of California Board of Registration for Professional Engineers and Land Surveyors.

Possession of a valid Class C California Driver's License (a Class B California Driver's License may be required for some positions in this class).

For those positions designated by the Department of Transportation (DOT) as safety-sensitive, applicants are required to complete a DOT mandated alcohol and drug screening records check. Reference checks from former DOT regulated employers are also required. (A positive test or refusal to test during the past two years will disqualify an applicant from consideration for County employment). Applicants for safety-sensitive positions must submit an H-6 Department of Motor Vehicles (DMV) driving history before hire.

Employees in safety-sensitive positions are subject to DOT alcohol/drug testing on a random basis or for reasonable suspicion.

PRE-EMPLOYMENT:

All employment offers are contingent upon successful completion of both a pre-employment physical exam, including a drug/alcohol test, and a criminal background investigation, which involves fingerprinting. (A felony or misdemeanor conviction may disqualify the applicant from County employment.)

PROBATIONARY PERIOD:

As an Approved Local Merit System, all County of Riverside employees, except those serving "At Will," are subject to the probationary period provisions as specified in the applicable Memorandum of Understanding, County Resolution, or Salary Ordinance. Temporary and Per Diem employees serve at the pleasure of the agency/department head.