

City of San José

ENGINEERING GEOLOGIST (3874)CLASS PURPOSE

Under direction, performs work of considerable difficulty in providing timely and consistent evaluation of geotechnical data and geotechnical expertise on City projects and reports. Performs related work as required.

TYPICAL DUTIES AND RESULTS (The position may not include all the duties listed, nor do the examples cover all the duties which may be performed.)

- Conducts engineering geological investigations and supervises the preparation of reports relative to existing and potential geological and seismic hazards encountered in site location, design, construction, and maintenance of all types of public works.
- Provides professional engineering geologic expertise in field investigations, mapping assignments, conducting analysis of soil stability, and other geological conditions.
- Reviews, evaluates, and field checks subdivision, grading, and building site plans for geological conditions.
- Reviews reports required under the Alquist-Priola Special Studies Zone Act and coordinates this activity with the State Geologist and the Seismic Safety Commission.
- Coordinates with the State Geologist in administering the Surface Mining and Reclamation Act.
- Participates in the preparation and updating of a seismic safety element in the General Plan and reviews General Plan amendments.
- Reviews geotechnical reports.
- Administers the City grading ordinance, including establishment of procedures, accepting applications and fees, reviewing plans, specifications, and related geotechnical data, issuing permits, making field inspections, and resolving violations and complaints.
- Provides geotechnical expertise in the review and preparation of environmental reports.
- Prepares and analyzes cost estimates for geological investigations and performs economic studies of engineering projects in connection with geological problems.
- Acts as the City geotechnical representative to various governmental and private organizations.
- May testify as an expert witness regarding geological matters in court proceedings or at public hearings before governmental bodies.

Typical End Results Include

Ensures that proposed development is not permitted on a hazardous fault; that amendments to the General Plan are geotechnically sound and proper; that site-specific recommendations are included in the site grading plan; that proposed grading does not create hazardous conditions and is in conformance with other requirements; and to ensure the completeness and accuracy of geotechnical studies.

DISTINGUISHING CHARACTERISTICS

This single position class reports to a Principal Civil Engineer and provides expertise in a wide range of engineering geological work from general instructions to obtain the information desired, and performs research and plans, organizes, and conducts studies necessary to develop desired geological, soils stability and foundation design data, conclusions and recommendations.

QUALIFICATIONS**Minimum Knowledge, Skills, and Abilities**

- Knowledge of geology and geological processes, with emphasis on geomorphology and quaternary geology.
- Knowledge of construction, geophysical, and geological survey techniques, equipment, and procedures related to civil engineering projects.
- Knowledge of the collection and application of geological and geophysical data to engineering problems.
- Knowledge of sub-surface exploration and sampling procedures.
- Knowledge of the fundamental principles of soil and rock mechanics, hydrology, petrology, and minerology.
- Knowledge of photogeologic techniques with emphasis on fault location and landslide identification.
- Ability to read and interpret geologic, geophysical, and soils and hydrologic data, and conduct geological and geophysical studies and interpret the results.
- Ability to prepare and interpret charts and graphs.
- Ability to prepare clear, concise, and professional reports.

Competency Knowledge, Skills, and Abilities

- Knowledge of regional geology, regional seismicity, and local seismic hazards.
- Knowledge of land development laws and regulations as they apply to geology soils.
- Ability to establish and maintain cooperative relationships with those contacted in the course of the work.

Education

A Baccalaureate Degree from an *accredited* college or university in Geology or Engineering Geology.

Experience

Five (5) years of professional experience in the field of soils and geological engineering.

Acceptable Substitutions

A Master's Degree in Geology, Engineering Geology, Hydrogeology, or Engineering may be substituted for one (1) year of the required five (5) years of experience.

Licenses/Certificates

Possession of a current Certificate of Registration as an Engineering Geologist issued by the California State Board of Registration for Geologists and Geophysicists.

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