CITY OF SANTA CRUZ
ASSISTANT ENGINEER I/II

Reports to	Associate Civil Engineer, Traffic Engineer, Deputy Water Director/Engineering Manager or other senior engineering staff as assigned.
Supervises	May provide lead direction to engineering technicians, survey and inspection personnel, City construction and maintenance crews, treatment plant operators and other engineering-related classes as assigned.
Bargaining Unit	Service

BASIC FUNCTION

Under general supervision designs, plans and coordinates various public works or water facilities projects; leads technical staff in project work; and performs related work as required.

DISTINGUISHING CHARACTERISTICS

The **Assistant Engineer I** is the entry-level class in the professional engineering series. Initially under immediate supervision, incumbents perform the more routine and basic engineering assignments, including plan review and inspection of public works or water facilities projects.

Incumbents progress from Assistant Engineer I to Assistant Engineer II after two years of experience with the City of Santa Cruz (a California Engineer-in-Training (EIT) Certificate may substitute for one year of experience) and upon recommendation by the supervisor and department head.

The **Assistant Engineer II** is the journey-level class in the professional engineering series. Under general supervision, incumbents perform the full scope of intermediate to advanced assignments, including planning, design, coordination, construction, plan review and inspection of public works or water facilities projects. Incumbents may serve as lead for assigned technical project staff.

TYPICAL DUTIES (*May include, but not limited to, those duties listed below.)*

- Performs intermediate to advanced level engineering calculations, computations, research, and analysis and related engineering support work for projects assigned.
- Coordinates and leads technical engineering personnel on a variety of projects or assignments as required.
- Works as technical liaison with developers, consultant engineers and other agency representatives on private and public development projects, subdivisions, systems design, assessment districts and other related projects.
- Performs contract administration on assigned construction projects; may include assisting in the development of request for proposals; developing specifications; monitoring progress payments; ensuring conformance with the conditions of the contract; conducting field inspections; reviewing change orders; and maintaining related documentation.
- Reviews and critiques development plans and specifications for conformance with the City requirements, State and Federal regulations and sound engineering practice.
- Prepares staff reports and correspondence as needed.
- Responds to inquiries and complaints relating to City projects and functions.
- Performs related engineering duties as required and assigned.

In addition to the above, the following duties are also performed in specific divisions:

Public Works/Construction and Design Divisions:

- Designs and prepares plans, specifications and estimates for various construction projects and activities such as streets, drainage structures, wastewater collection and pumping systems, utility facilities and other public works projects.

Public Works/Sanitary Division:

- Assists in the implementation of the sewer system master plan.
- Performs sewer capacity and flow calculations for proposed developments.
- Calculates solid waste disposal volumes and performs landfill site capacity analyses.
- Performs various administrative projects, including city ordinance revisions and sewer and refuse fee rate schedule reviews.
- May design and prepare plans, specifications and estimates for various construction projects such as wastewater collection, pumping and treatment systems and sanitary landfill facilities.

Public Works/Traffic Engineering Division:

- Develops requests for proposals for area-wide traffic studies.
- Administers contracts and agreements with traffic engineering consultants and field contractors.
- Prepares the Annual Traffic Report.
- Conducts traffic engineering studies such as traffic volume studies, collision diagrams, speed surveys, time-space diagrams, parking usage studies, travel time and delay studies and other related projects.
- Designs and prepares plans, specifications and estimates for various traffic projects such as parking, circulation, signalization and median improvements.
- Assists in staffing commissions, including agenda preparation, oral presentations and written reports.

Water Department:

- Designs and prepares plans, specifications and estimates for various construction projects and activities such as reservoir siting and sizing, distribution and transmission main sizing, groundwater, surface water and desalination treatment and pumping facility design and related civil projects.
- Checks survey calculations, legal descriptions of various properties involved as required.
- May negotiate water main extension agreements.

MINIMUM QUALIFICATIONS

Knowledge:

- Computer applications used in civil engineering such as Autocad

Abilities:

- Perform difficult engineering computations, evaluations and research.
- Write and compile effective technical and administrative reports.
- Understand and give verbal and written instructions, to assign tasks and review quality and accuracy of work.
- Communicate information clearly and accurately.
- Effectively plan and coordinate all aspects of an assigned project.
- Establish and maintain effective working relationships with a wide variety of individuals.

In addition to the above, the following are also required for Assistant Engineer II in specific divisions:

Public Works/Construction and Design Divisions:

- Knowledge of and ability to apply the principles, practices and methods of current civil engineering as related to the planning, design and construction of public works projects and facilities.

Public Works/Sanitary Division:

- Knowledge of and ability to apply the principles, practices and methods of current sanitary engineering as related to the planning, design and operation of wastewater and solid waste facilities.

Public Works/Traffic Engineering Division:

- Knowledge of and ability to apply the principles, practices and methods of current traffic engineering as related to the planning, design and construction of transportation-related projects.

Water Department

- Knowledge of and ability to apply the principles, practices and methods of current civil engineering and hydraulics as related to the planning, design and construction of water utility projects and facilities.

EDUCATION AND EXPERIENCE

Assistant Engineer I: Any combination of education and experience that provides the above knowledge, skills and abilities necessary for an **Assistant Engineer I is qualifying.**. A typical way to obtain the required qualifications is to possess the equivalent of the following:

- A bachelor's degree in Civil Engineering from an accredited college or university or a California EIT Certificate.

Assistant Engineer II: Any combination of education and experience that provides the above knowledge, skills and abilities necessary for an **Assistant Engineer II is qualilfying**. A typical way of obtaining the required qualifications is to possess the equivalent of the following:

- Two years applicable professional engineering experience, and
- A Bachelor's degree in Civil Engineering from an accredited college or university. (A California EIT Certificate may be substituted for one year of the experience.)

- OR –

- Three years of applicable professional engineering experience, and
- Three years of related undergraduate engineering coursework, and
- A California EIT Certificate.

LICENSES/CERTIFICATES

- Possession at time of hire and ability to maintain a valid California driver's license and a safe driving record.

DESIRABLE QUALIFICATIONS

- Registration as a Civil Engineer in the state of California.
- Supervisory experience.
- Civil engineering experience with a public agency.

Public Works/Sanitary Divisions:

- Knowledge of State and Federal water quality and solid waste regulations.
- Knowledge of the procedures and requirements of the California Clean Water Grant Program.

Public Works/Traffic Engineering Division:

- Knowledge of State and Federal traffic design manuals codes and standards.
- Experience in using micro-computers in engineering related functions.

Water Department

- Knowledge of standard waterworks practices including piping, pumps, motors and water treatment equipment.
- Knowledge of the principles of sanitary engineering and public health, including water quality.

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Career Ladder

- City Engineer or Engineer Manager
- Associate Civil Engineer or Engineering Associate
- *Assistant Engineer I/II*
- Engineering Technician