



NATIONAL DRAINAGE AND IRRIGATION AUTHORITY

JOB DESCRIPTION

POSITION: HYDRAULIC ENGINEER

REPORTING TO: DEPUTY CHIEF EXECUTIVE OFFICER

SUPERVISES: CIVIL ENGINEER

SALARY SCALE: BAND 6

The incumbent will be required to oversee projects related to water supply, drainage systems, and flooding.

Main Responsibilities

- Prepares and takes responsibility for all hydraulic designs
- Manages all hydraulic equipment to prepare all bid proposals and design all hydraulic according to contract specifications and prepares bill of quantities, estimates and drawing for design.
- Prepares all procurement specifications, and all technical procedures and provides support to all material requirement. Review all designs to improve hydraulic performance
- Performs research on new technology to develop new products and assist to prepare all prototypes and ensures utilization of all engineering tools for various projects.
- Manages efficient communication with all internal and external consultants, contractors and suppliers and resolves all technical issues. Prepare drafts for all engineering projects and recommends change proposals.
- Monitors efficient working of all hydraulic structures and provide support to other design engineers.
- Evaluates all performance requirements according to hydraulic specifications
- Administers all specification for all design and evaluate all test results. Monitors all contract performance and maintains and improves all test logs. Recommends improvement to all information and maintain accuracy of all projects.
- Manages all communication with team work and ensures adherence to corporate standards and prepares designs of all hydraulic equipment according to assemble requirements.

- Provides expertise and guidance on various hydraulic projects that may include reviews and improvements to water supply and drainage systems.
- Conducts field studies on hydraulic facilities; identifies, recommends, and tests strategies to resolve problems and concerns.
- Researches and proposes expansion, upgrades, and/or necessary maintenance work required to maintain and improve infrastructure.
- Designs and tests hydraulic systems
- Uses computer-aided design (CAD) software to create blueprints for water-control facilities.
- Determines appropriate materials and equipment required for projects and facilities including pumps, pipes, and hydraulic structures
- Works in conjunction with other design engineers
- Performs other related duties as required

Requirements

Master's Degree in Hydraulic Engineering from a recognized institution along with the minimum of three (3) years post graduate experience

Or

First Degree in Civil Engineering from a recognized University along with the minimum of five (5) years post graduate experience , especially in the execution of design.

Supervisory Responsibility

This job holder will be responsible for supervising the minimum of three junior Engineers

Principal organizational relationships

The Hydraulic Engineer interfaces regularly with the Chief Executive Officer and senior personnel from other agencies, local and international and government ministries on various matters.

Other skills

Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Mathematics - Using mathematics to solve problems.

Complex Problem Solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Operations Analysis - Analyzing needs and engineering **Systems Analysis** - Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Science - Using scientific rules and methods to solve problems.

Systems Evaluation - Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

Judgment and Decision Making - Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Coordination - Adjusting actions in relation to others' actions.

Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Work Environment

While performing the duties of this job, the employee regularly works in the field setting

Physical Demands

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.

Position Type/Expected Hours of Work

This is a full-time position. Monday to Friday but may be required to work weekends and beyond the call of duty as the need arises.

*Prepared by: Ms. Janel Blackman
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Chief Executive Officer
2021-07-14*