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STORMWATER DESIGN ENGINEER

ABOUT US

Our philosophy: Unbounded Engineering

We believe true engineering knows no limits, no boundaries between disciplines, no barriers to innovation, and no restrictions on who can lead or how far we can go.

At Zimile, we're redefining what's possible by breaking through constraints and building a future shaped by purpose, creativity, and bold thinking.

We believe that infrastructure is more than concrete and steel – it is the foundation for opportunity, dignity, and human connection. Since our inception in 2009, we have been on a mission to engineer solutions that build the nation while uplifting its people. Every road we pave, every pipeline we lay, and every community we serve reflects our commitment to reshaping how infrastructure serves society – **bridging gaps in access, equity, and resilience.**

Transport

We see transport not just as a means to move people and goods, but as the veins of a thriving society. Whether it's designing rural access roads or urban mobility corridors, our solutions are smart, sustainable, and tailored for impact. We engineer with empathy - ensuring our infrastructure connects people to schools, clinics, jobs, and each other.

Water

Water is life, and equitable access is non-negotiable. At Zimile, we deliver water infrastructure that goes beyond compliance. Our approach integrates sustainability, community engagement, and technical excellence. We harness innovation to protect, distribute, and manage this vital resource - ensuring future generations inherit a healthier, water-secure world.

Innovation

Innovation is in our DNA. Whether it's leveraging digital tools, modern construction methodologies, or data-driven planning, we are constantly reimagining how infrastructure is conceived and delivered. Our diverse teams co-create with clients and communities - bringing fresh perspectives to complex challenges, and unlocking smarter ways to build resilience.

PURPOSE OF THE ROLE

Location: Midrand

Department: Transport Unit

Reporting to: Business Unit Head: Transport

The Stormwater Design Engineer will lead the hydrological and hydraulic design of stormwater systems within transport infrastructure projects. This includes developing sustainable drainage solutions for roads, highways, and transport corridors, ensuring resilience against flooding, erosion, climate change and environmental risks. The successful candidate will combine strong technical expertise, commercial acumen, environmental awareness, and innovative thinking to protect infrastructure, enhance safety, and improve the quality of life for users and communities.

KEY RESPONSIBILITIES

Technical & design

- Undertake hydrological and hydraulic modelling for transport-related stormwater systems, using appropriate 1D and 2D tools (e.g. HEC-HMS, HEC-RAS, TUFLOW, PCSWMM).
- Design effective and sustainable stormwater infrastructure including stormwater drains, culverts, open channels, attenuation/detention ponds, swales, soakaways, and Sustainable Urban Drainage Systems (SuDS).
- Conduct flood risk assessments, catchment modelling, and stormwater master planning using both empirical and advanced modelling techniques.
- Analyse rainfall data and return periods to develop appropriate design storms and runoff coefficients for urban and rural environments.
- Integrate erosion and sediment control measures into designs, considering long-term maintenance, public safety, and environmental protection.
- Incorporate digital design tools (AutoCAD Civil 3D, MicroDrainage, InfoWorks ICM, QGIS/ArcGIS) to support spatial analysis and engineering documentation.
- Apply water quality treatment standards in stormwater system design, including pollutant removal techniques (e.g. gross pollutant traps, biofiltration, infiltration).
- Ensure all designs meet the applicable standards and guidelines, including SANS, TRH, SANRAL, municipal bylaws, and Department of Water and Sanitation (DWS) regulations.
- Embed resilience principles to address climate change, increased rainfall intensities, and asset longevity.
- Provide technical input to environmental assessments and support water-use licence applications, where required.

Project delivery & implementation

- Prepare design drawings, models, and technical reports to support tender and construction documentation.
- Ensure constructability, operational feasibility, and safety of stormwater infrastructure designs.
- Support contract administration processes, including bill of quantities, cost estimates, and technical responses during bidding and tender evaluation.
- Participate in site inspections and construction monitoring to ensure quality control and alignment with design intent.
- Develop operation and maintenance plans for long-term asset management and compliance.

Client & stakeholder engagement

- Liaise with local municipalities, SANRAL, DWS, catchment management agencies, and other relevant authorities to secure permits and design approvals.
- Coordinate with environmental consultants, town planners, and developers to integrate stormwater solutions into broader development plans.
- Attend public meetings and stakeholder engagements to present technical concepts in accessible terms.
- Maintain strong, professional client relationships by ensuring deliverables are met on time and to a high standard.

Commercial & business development

- Support preparation of fee proposals, work programmes, and project budgets.
- Identify value engineering opportunities to optimise design and reduce lifecycle costs without compromising performance.
- Contribute to business development by identifying stormwater-related opportunities and supporting bid documentation.
- Ensure time and resource efficiency in project delivery, contributing to overall profitability.

Team & professional development

- Work collaboratively in multidisciplinary project teams, contributing to integrated transport and civil infrastructure projects.
- Provide mentorship to junior engineers, graduates, and technicians, supporting capacity-building and technical growth.
- Stay informed of industry advancements in stormwater engineering, climate adaptation, and sustainable design approaches.
- Promote knowledge-sharing and technical learning within the team and broader organisation.

CORE COMPETENCIES

- Strong technical knowledge and critical thinking in stormwater and water resource engineering.
- High attention to detail and accuracy in design, documentation, and modelling outputs.
- Ability to manage time, prioritise work, and deliver results under pressure in a consulting environment.
- Excellent communication, presentation, and technical report-writing skills.
- Client-focused, with the ability to build trust, communicate clearly, and manage expectations.
- Proactive, innovative mindset with a strong interest in sustainable and climate-resilient infrastructure.
- A collaborative team player with leadership potential and a commitment to continuous learning.

QUALIFICATION REQUIREMENTS

- Bachelor's Degree in Civil Engineering, Water Engineering, Environmental Engineering, or a closely related field.
- Registration with ECSA (Pr. Eng / Pr. Tech Eng) or in the process of registering.
- 4–8 years of relevant experience in stormwater drainage, hydraulic modelling, or water resource engineering within a consulting or infrastructure environment.

- Proficiency in hydrological and hydraulic software tools such as HEC-HMS, HEC-RAS (1D/2D), PCSWMM, TUFLOW, or equivalent.
- Strong skills in AutoCAD Civil 3D and GIS (QGIS or ArcGIS) for spatial and design integration.
- Demonstrated experience in stormwater master planning, infrastructure design, and municipal approvals.
- Sound understanding of DWS regulations, NWA, NEMA, and Water Use Licence processes.
- Familiarity with flood risk and climate change adaptation strategies.
- Working knowledge of contract documentation, procurement processes, and construction support.

WHY JOIN ZIMILE?

- Work on high-impact transport infrastructure projects that shape the future of mobility in South Africa.
- Be part of a black-owned firm that values innovation, sustainability, and social impact.
- Engage in projects that integrate stormwater and transport design for resilient, future-ready infrastructure.
- Benefit from mentorship, professional growth opportunities, and exposure to diverse, challenging projects.
- Join a team that is redefining what transport infrastructure can achieve for people and communities.

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