VACANCY FOR:

# STRUCTURAL ENGINEER

| | |
|---|---|
| JOB TITLE | Structural Engineer |
| REPORTS TO: | Head, Climate Infrastructure / CEO |
| ENGAGEMENT PERIOD: | 12 months (Renewable) |

## MARKET CONTEXT

Nigeria currently has an estimated population of 220 million and the United Nations estimates that by 2050, Nigeria would have reached a 400 million populace and added 189 million urban dwellers which translate into an annual housing requirement over the coming decades of at least 900,000 units to keep up with growing housing demand and urban migration. Based on current forecast construction, Nigeria's overall accumulated housing deficit is about 28 million units#, as of 2024. The estimated annual cost to bridge the housing gap is about $6.25 billion# (NGN10 trillion). Appropriately structured financing mechanisms are therefore required to make home financing more affordable and accessible to homebuyers, at a greater scale, providing access to housing but also solving the challenge of offtake for property developers..

Despite the housing deficit which creates a significant opportunity for developer financing in Nigeria, the market is constrained by offtake risk inherent in housing infrastructure projects occasioned by an absence of an effective mortgage solution that provides prospective homebuyers access to affordable home loan products. This situation has continued to weaken developers' ability to access sustainable funding and scale their construction activities.

## PROBLEM STATEMENT

As part of its strategic development initiatives, InfraCredit, with the support of development partners established the Green Resilient Housing Enhancement Facility (GRHEF or "the Facility"), a project preparation facility designed to address persistent challenges that limit access to long-term domestic institutional capital for housing
delivery in Nigeria. Despite a growing pipeline of climate-resilient housing projects, many developments continue to face delays in reaching financial close due to critical gaps in project preparation, particularly in technical, environmental, financial, and legal
readiness. These challenges often extend transaction timelines, increase development costs, and undermine overall project bankability.

To bridge these gaps, GRHEF provides early-stage project preparation support and technical assistance to housing developers. Through its Project Development Facility (PDF), GRHEF supports project sponsors in conducting feasibility studies, integrating climate-resilient design, and improving project documentation and investment readiness in line with InfraCredit's eligibility criteria. In assessing housing developers and their respective projects, InfraCredit conducts comprehensive Technical and Commercial Due Diligence (TCDD) alongside financial, legal, and environmental and social (E&S) assessments. The TCDD process involves engaging an external consulting firm comprising qualified housing professionals across architecture, quantity surveying, structural and civil engineering, environmental and geotechnical assessment, and mechanical and electrical systems. These experts evaluate, validate, and provide recommendations on the technical soundness and compliance of proposed projects with international green building standards (such as IFC's EDGE) and relevant local building laws and codes.

The consulting team's work typically spans various construction stages and disciplines, including (but not limited to) environmental and geotechnical assessments, land and topographical surveys, civil and structural engineering, mechanical and electrical systems, architecture, urban design, quantity surveying, construction management, real estate, and property and facility management. The independent assessments and recommendations produced by the due diligence consultant are submitted to InfraCredit for review and alignment with its housing programme criteria.

To ensure seamless project preparation, execution and effective implementation of the TCDD process, InfraCredit seeks to engage the services of an in-house Structural Engineer. This role will provide technical support to clients (developers) in project preparation and investment-readiness activities under GRHEF, before interactions with TCDD consultants to ensure housing projects meet InfraCredit's standards and increase the number of transactions reaching financial close. The Structural Engineer will work closely with the transaction team, including Transactors, Transaction Legal, and Transaction E&S, to manage the technical and sustainability components of housing deals from origination through project readiness, consultant engagement, TCDD reviews (desktop and site), credit approval and ongoing project monitoring after financial close.

## SCOPE OF WORK

The Structural Engineer's responsibilities shall include, but not be limited to, the following:

### A. Project Preparation and Readiness Support

- Review and evaluate developers' project documents, including structural designs, drawings, engineering reports and feasibility studies to ensure compliance with relevant codes, standards, and best practices to identify gaps before TCDD initiation.
- Develop project documents for GRHEF-sponsored projects, including structural designs, drawings, engineering reports and feasibility studies in compliance with relevant codes, standards, and best practices before TCDD initiation
- Provide early guidance on structural design optimization, material selection, and construction methods to enhance durability, safety, cost efficiency and sustainability.
- Identify design deficiencies, structural risks, or constructability challenges and recommend corrective measures.

- Identify structural cost-related risks and recommend cost optimization or mitigation measures.
- Support developers in meeting InfraCredit's minimum technical and structural requirements for project viability.
- Ensure that climate-resilient design principles are embedded in structural systems, foundations, and materials.
- Review integration of climate-resilient and green building measures into project design and cost planning

**B. Technical and Commercial Due Diligence (TCDD) Coordination and Assessment**

- Support InfraCredit's technical due diligence process by conducting independent reviews of developers' structural submissions.
- Evaluate consultants' structural and geotechnical reports for completeness, consistency, and alignment with InfraCredit's technical standards.
- Participate in technical site visits to assess existing site conditions, structural readiness, and quality of works.
- Prepare technical review reports highlighting key findings, risks, and recommendations.

**C. Climate Resilience and Sustainable Design Integration**

- Ensure that structural designs incorporate resilience measures to withstand local climate risks, including wind loads, flooding, and soil movement.
- Collaborate with the Environmental and Social (E&S) team to ensure alignment between structural design and green building certification requirements such as IFC EDGE.
- Recommend appropriate structural systems, materials, and technologies that support energy efficiency and sustainability.

**D. Construction Quality Assurance and Monitoring**

- Review and verify structural drawings and construction documents issued for construction.
- Monitor construction progress to ensure that structural works conform to approved designs, specifications, and standards.
- Review structural modifications, variation orders, and site instructions for technical soundness and safety implications.
- Participate in site inspections and provide progress and quality assurance reports.
- Participate in internal investment committee reviews to present technical findings and recommendations.

**E. Post-Financial Close and Project Completion Support**

- Support periodic structural inspections and prepare monitoring reports highlighting performance, deviations, and corrective actions.
- Review as-built drawings and completion certificates to ensure consistency with approved structural designs.
- Provide technical input during project handover and lessons-learned documentation.
- Review progress reports, variation orders, and claims for reasonableness and compliance with agreed terms.
- Support periodic technical site visits and prepare monitoring reports for InfraCredit's management and investors.

**F. Capacity Building and Knowledge Support**

- input to internal capacity-building workshops and knowledge-sharing sessions on project preparation, structural engineering, quality assurance, and resilient design.
- Contribute to the continuous improvement of InfraCredit's housing technical due diligence framework from a structural engineering perspective.
- Support continuous improvement of InfraCredit's technical due diligence framework from a structural engineering perspective
- Documentation of lessons learned and re-occurring structural issues to strengthen InfraCredit's due diligence and monitoring framework.
- Develop e-learning modules focused on structural design considerations for green affordable housing projects.

## DELIVERABLES

The Structural Engineer shall be responsible for providing the following key deliverables:

- Supporting early-stage developers with preparation of structural designs for climate-resilient housing projects.
- Structural design review reports and technical risk assessments.
- Structural inspection and monitoring reports.
- Validated and annotated structural drawings and engineering documents.
- Technical input to InfraCredit's due diligence and investment review documentation.

- Contributions to internal knowledge materials and structural design guidelines.
- Technical input to due diligence and investment review documentation.
- Preparation of structural design support materials and guidance for developers
- Documented lessons learned and re-occurring structural issues from all housing transactions
- Developed e-learning modules on green affordable housing structural elements.

## EXPECTED OUTCOMES/ RESULTS

The work stream is expected to deliver the following outcomes:

- Improved project quality, cost efficiency, and bankability through robust technical reviews and cost optimization.
- Increased number of housing projects meeting InfraCredit's due diligence criteria and reduced time to financial close (by addressing technical gaps early).
- Enhanced internal capacity to assess and quantify incremental climate-resilient costs in housing projects.
- More streamlined coordination of Technical and Commercial Due Diligence (TCDD) processes, ensuring timely delivery of consultant outputs.
- Strengthened project monitoring, cost control, and risk management throughout project implementation.
- Developed internal technical capacity, tools, and benchmarks to support future housing transactions.

## QUALIFICATIONS AND EDUCATION REQUIREMENTS

Candidates for the role should meet the following requirements:

- Bachelor's or Master's degree in Civil or Structural Engineering or a related discipline.
- Professional certification and membership in a recognized body such as the Nigeria Society of Engineers (NSE) and the Council for the Regulation of Engineering in Nigeria (COREN) are required.
- Certification in Project Management (PMP, PRINCE2) or Green Building (e.g., EDGE Expert/Accredited Professional) will be an added advantage.

- Minimum of 7 - 10 years of relevant experience in structural design, construction supervision, or infrastructure project development within the housing sector.
- Demonstrated experience in project appraisal, feasibility assessment, and cost estimation for residential or mixed-use developments, PPP housing projects, affordable housing developments, or large-scale civil works.
- Proven ability to conduct or review Technical and Commercial Due Diligence (TCDD) and manage consultant engagements.
- Proven ability to review, analyze, and interpret technical drawings, designs, and engineering reports.
- Familiarity with international green building standards (e.g., IFC EDGE, LEED) and local building codes and regulations.
- Strong analytical, financial modeling, and reporting skills, with proficiency in MS Excel, MS Project, and cost estimation software.
- Excellent communication, coordination, and stakeholder engagement skills, particularly in multi-disciplinary project teams.

## KEY PERFORMANCE INDICATORS

The performance of the Structural Engineer will be measured against the following key indicators to ensure alignment with InfraCredit's objectives under the Green Resilient Housing Enhancement Facility (GRHEF):

1. **Timeliness and Quality of Deliverables**
   - Completion of structural design reviews, technical assessments, and reports within agreed timelines.
   - Quality, accuracy, and thoroughness of structural evaluations in line with InfraCredit's technical and investment standards.

2. **Technical and Commercial Due Diligence (TCDD) Support**
   - Active participation in TCDD processes, including desktop reviews and site inspections.
   - Accuracy and clarity of structural engineering inputs in due diligence reports and investment documentation.

- Effective coordination with external consultants to ensure consistency and completeness of technical submissions

3. **Project Readiness and Financial Close Support**
   - Contribution to improved project readiness and structural soundness, facilitating timely financial close.
   - Validation of structural drawings, designs, and engineering reports to ensure safety, feasibility, and compliance with building codes.
   - Timely identification and resolution of structural design gaps prior to credit consideration.

4. **Sustainability and Climate Resilience Integration**
   - Incorporation of climate-resilient and green building principles (e.g., energy efficiency, material optimization, flood and wind resistance) into structural designs.
   - Collaboration with the Environmental and Social (E&S) team to align structural elements with green certification standards such as IFC EDGE.

5. **Construction Monitoring and Quality Assurance**
   - Regular site monitoring and submission of structural inspection reports detailing progress, quality, and compliance with approved designs.
   - Timely identification and reporting of structural deviations, risks, or quality issues, with actionable recommendations for corrective measures.

6. **Capacity Building and Knowledge Sharing**
   - Contribution to the development of InfraCredit's internal structural design and quality assurance guidelines.
   - Active participation in internal capacity-building workshops, training, and knowledge-sharing sessions on resilient structural design and engineering best practices.
   - Documentation of lessons learned and recommendations to strengthen InfraCredit's due diligence and monitoring framework from a structural perspective.
   - Development of e-learning modules focused on structural engineering considerations for green affordable housing projects.

- Digitisation of workflows, including end-to-end digital reviews, standardised templates, and efficient document management with reduced turnaround times.

## COMPENSATION

Negotiable and Competitive

InfraCredit

Securing Infrastructure Finance

WWW.**INFRACREDIT**.NG