

Title: **FUNCTIONAL  
SPECIFICATION FOR THE  
CENTRAL GRID  
SUBSTATION BUILDINGS  
CERTIFICATE OF  
OCCUPANCY**

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Compiled by



**S. Sibiya**

**Senior Advisor: Architecture  
Substation Engineering**

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Functional Responsibility

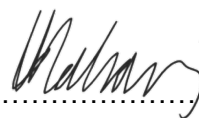


**A. Maneli**

**Civil Engineering manager:  
Substation Engineering**

Date: .23.-.05.-.2023.....

Authorised by



**S. Maharaj**

**Senior Manager:  
Substation Engineering**

Date: 29/5/2023.....

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### CONTROLLED DISCLOSURE

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## **1. EXECUTIVE SUMMARY**

This document has been developed with the aim at appointing one or more architects to prepare drawings and documentations for the Central grid Transmission substation buildings to submit it to the local council for approval. The aim of the approval is to obtain an occupancy certificate for each building.

## **2. INTRODUCTION**

### **2.1 ESKOM SUBSTATION BUILDING PLAN APPROVAL HISTORY**

1. The history of the Eskom Transmission building plan approval is as follows:  
The Government of the Republic of South Africa is the sole shareholder of Eskom and the shareholder representative is the Minister of Public Enterprises, as such, the National Building Regulations and Building Standards Act, No 103 of 1977, (the Act) is not binding upon Eskom. This is provided for in Section 2 of the Act.

Therefore, Eskom is not required to obtain written approval prior to the erection of any building to be erected by themselves or on their behalf, the only obligation is prior to the erection of any building, to submit to the local authority plans and specifications for their information and comment.

This is the reason why TX buildings were not submitted for approval.

2. However, Section 14 makes provision for the issuing of Occupancy Certificates but only in respect of buildings for which approval was granted in terms of Section 7 of the Act.

It follows therefore that if there was no approval in terms of Section 7 a Certificate of Occupancy cannot be issued.

### **2.2 COMPLIANCE TO THE ACT**

The National building regulation and building standards act came into effect in September 1985 and was amended in October 2008. Therefor buildings that were erected before the commencement of the act are not affected by the requirements if they were altered or modified (refurbished) after the commencement date.

This is an extract from a mail dated 22 March 2018 from Bonnyface Kheo, middle manager SHEQ, Eskom real estate (ERE)

## **3. CENTRAL GRID SUBSTATION BUILDINGS**

The Transmission substations of the Central grid were listed, and the construction date of the 31 substation buildings were checked against the compliance date of the act 1985. The

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following 4 substations were identified of being constructed after 1985 and need to be approved by the local council.

1. Brenner substation
2. Lepini substation
3. Lulamisa substation
4. Pelly substation

The following 2 substations were also identified of being constructed after 1985 and need to be approved by the local council however there are no records of the stations title deeds therefore the consultant will not be able to submit their drawings for approval.

1. ETNA substation
2. Fordsburg substation

#### **4. PURPOSE**

The purpose of the document is to specify Eskom's requirements for the approval of the listed substation buildings. It gives a clear description of what is required from the professional team and the building design.

#### **5. APPLICABILITY**

This document is applicable to the appointed consultant project team involved to prepare plans and documentation for council approval to obtain an occupancy certificate.

#### **6. NORMATIVE / INFORMATIVE REFERENCES**

##### **Normative**

- [1] SANS 1200 Standardized Specification for Civil Engineering Construction
- [2] SANS 204:2011 Energy efficiency in buildings.
- [3] SANS 10400 The application of the national Building Regulations
- [4] SANS 10400-XA:2011 Energy usage in buildings.
- [5] SANS 10114-1 Interior lighting Part 1 Artificial lighting of interiors.
- [6] SANS 10114-2 Interior lighting Part 2, Emergency lighting.
- [7] SANS 10142-1 The wiring of premises – Part 1: Low-voltage installations.
- [8] SANS 475, Luminaires for interior lighting, streetlighting and floodlighting – Performance requirements
- [9] SANS 60598-1 Luminaires Part 1: General requirements and tests

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- [10] EN 55015 Limits and methods of measurement of radio disturbance of electrical lighting or equipment.
- [11] SANS 10108, The classification of hazardous locations and the selection of equipment for use in such locations
- [12] 240-82172806 Air conditioning in transmission substation buildings and telecommunication sites
- [13] 240-56177186 Standard for Battery rooms

## **7. CLASSIFICATION**

**Controlled disclosure:** controlled disclosure to external parties (either enforced by law, or discretionary).

## **8. ABBREVIATIONS**

| <b>Abbreviation</b> | <b>Description</b>                                     |
|---------------------|--|
| SANS                | South African National Standard                        |
| SACAP               | South African Council for the Architectural Profession |
|                     |  |
|                     |  |

## **9. ROLES AND RESPONSIBILITIES**

- a) The appointed architect shall act as the Principal Agent for the Employer.

## **10. PROCESS FOR MONITORING**

None

## **11. RELATED / SUPPORTING DOCUMENTS**

240-56177186 - Standard for Battery room design.

240 - 82172806 – Standard for Air conditioning in Transmission substation buildings and telecommunication sites

240 – 83382122 – Emergency lighting in Transmission substations

240-71062174 – Generic substation design

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## **12. DESIGN INFORMATION**

### **12.1 RESPONSIBILITY OF CONTRACTOR**

- 1) The contractor shall render professional services by providing functional, cost effective and architecturally acceptable drawings and documents to each local council and district land use management or municipal by-law requirements. The contractor is responsible for the entire council submission, payments, correspondence, and execution of the project. This responsibility includes but not limited to:
- 2) Obtaining complete site information from Eskom real estate and National surveyor general data.
- 3) Obtaining the relevant title deed and available drawings from Eskom.
- 4) Compliance with the functional requirements of the Client.
- 5) Compliance with the Eskom policies, standards, and other requirements of Eskom by studying the full range of manuals and guides of Eskom and by liaising with the Project Manager.
- 6) Compliance with the SANS standards and requirements of Local Authorities and other statutory requirements.
- 7) Preparing a site development or site plan.
- 8) Preparing building drawings for council approval of each building.
- 9) Preparing all the required council, compliance, SANS etc. documentation for council approval.
- 10) Execution of the project within the stated space norms and cost limits.
- 11) Full responsibility for the timeous and complete exchange of information between the contractor and Eskom's appointed representatives during all stages of the project. Regular co-ordination meetings with the Professional Team are required.
- 12) Setting up of a detailed program for design and documentation of the project and the strict adherence to the target dates set for all stages of design and documentation. The programme to include the work of all disciplines.
- 13) Monthly reports on progress during design and documentation. Documentation will not be checked by Eskom.
- 14) Documentation may be spot checked by the Eskom, but the final responsibility of the documentation is still the appointed consultant's responsibility.
- 15) Submission of complete approved plans and occupancy certificate package to Eskom.
- 16) The following approval certificates will be required.

### **CONTROLLED DISCLOSURE**

- electrical compliance
- mechanical ventilation system compliance
- structural system compliance
- fire protection system compliance
- fire installation compliance
- energy efficiency compliance

## **12.2 SCOPE OF WORK (SEE POINT 12.1)**

The contractor shall perform architectural drawings for Stages 1 to 6 as stipulated below according to South African Council for the Architectural Profession.

Stage – 1. Inception – Full

Stage – 2. Concept and viability (concept design) – Full

Stage – 3. Design Development – full

Stage – 4.1 Local council submission Documentation

Stage - 4.2 N.A Construction and tender documentation.

Stage - 5. Provide occupancy certificate.

Stage – 6. Close out – facilitate the project close-out with documentation, certificates, and approved drawings with the council stamp. PDF version

## **13. CONSULTATION WITH LOCAL AUTHORITY**

It is the responsibility of the contractor to contact the Local Authority to clarify any statutory town planning regulations, building lines, height restrictions, coverage, floor space ratios, safety, fire management and other requirements and approvals.

The submission shall comply with the local area building BY-law or Land use management scheme.

## **14. STATUTORY REQUIREMENTS**

### **14.1 SUBMISSION OF PLANS TO LOCAL AUTHORITY**

The consultant shall submit the plans and documentation to the Local Authority for approval.

The consultant shall make payment for the approval of the plans

A copy of the submission letter shall be sent to the Eskom project manager.

### **CONTROLLED DISCLOSURE**

## 15. AUTHORISATION

This document has been seen and accepted by:

| Name           | Designation                        |
|----------------|------------------------------------|
| Andile Maneli  | Middle manager – Civil Engineering |
| Subhas Maharaj | Senior Manager – Engineering       |
|                |                                    |
|                |                                    |
|                |                                    |

## 16. REVISIONS

| Date       | Rev. | Compiler  | Remarks |
|------------|------|-----------|---------|
| 30-03-2023 | 0    | S. Sibiya |         |
|            |      |           |         |

## 17. DEVELOPMENT TEAM

Sibonelo Sibiya – Prof. Senior Architectural Technologist - SACAP

Dawie Naude – Prof Architectural Technologist - SACAP

Civil Engineering Technician – ECSA

Anton Naude – Prof. Eng. Technologist. ECSA

## 18. ACKNOWLEDGEMENTS

None

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