



## Scope of Work – Substation Engineering

## Technology

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Zeus

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## 1. INTRODUCTION

The existing outer security fence at Zeus Substation has been breached on a number of occasions. This has resulted in theft of infrastructure within the substation yards. In order to prevent or delay any further breaches of the fence, a new outer security fence with improved features will be installed. This document covers the construction work that will be done at Zeus Substation.

## 2. REFERENCES

- [1] (240-55922824) - Substation Layout Design Guideline
- [2] (240-109644476) - Standard for Implementation of Substation Layouts for Transmission Substations
- [3] South African Grid Code
- [4] Occupational Health and Safety Act (OHS Act) 85 of 1993
- [5] (32-1205) - Eskom Maintenance Management Policy
- [6] (TST41-794) - Substation and Facility Maintenance
- [7] (32-727) - Eskom Safety, Health, Environment and Quality policy
- [8] (SANS 1200) – General Civil
- [9] (240-1001183119) - Standard for Fences in Eskom Transmission Stations
- [10] (240-108982466) - Standard for HV Yard Stone in Eskom Substations
- [11] (TST41-877) - Transmission Substations Design Earthing Standard
- [12] (240-139282493) – Security Lighting for Eskom applications
- [13] (240-75883230) – Refurbishment of Steel Power Lines Structures Standard
- [14] (240-78980848) – Non-lethal Fence Specification

## 3. SCOPE OF WORK

Designs and construction are in accordance to [1] – [21]. All construction is to be carried out in accordance with Eskom's Safety, Health and Environmental Specification. Construction will be done in close proximity to other electrical equipment, therefore all necessary safety procedures must be strictly adhered to.

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The Civil Scope of Work involves the following design aspects:

- Outer Security fence;
- Installation of access gate;
- Installation of stone verge

### 3.1 OUTER FENCE

The new outer fence will be a Category 2 fence as defined in 240-76368574-rev 2. This document should be referenced in conjunction with the relevant drawings. Contractors to note that once panels are delivered to site, a sample pf 3 will be taken for testing to ensure compliance with Eskom specifications.

The scope of work is as follows:

- Dismantle and completely remove the existing outer security fence
- Install the new outer security fence 1 m on the inside of the existing fence
- The installation is to be done according to the layout shown on ZEU20P07-SE-E42
- The fence itself shall be in accordance with the specification outlined on document 240-76368574-rev 2

### 3.2 ACCESS GATES

- The access gates must be removed completely and re-used as a non-lethal gate
- A new access gate according to drawing 0.54/7470 sht. 1 to 11 must be installed complete with gate motors, gates and sleeves as shown on drawing ZEU20P07-SE-E42

### 3.3 STONE VERGE

- Clear vegetation to in the affected area as shown on 0.54-393-C32
- Level and compact in-situ
- Place weedkiller
- Place yardstone as specified on 0.54-393-C32

## 4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
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## 5. REVISIONS

Date	Rev.	Compiler/s	Remarks
04 December 2020	0	A. Mayet	First Issue

## 6. DEVELOPMENTAL TEAM

The following people were involved in the development of this document:

- Azhar Mayet

## 7. ACKNOWLEDGEMENTS

- Paul Doyle

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