ANNEXURE "F"

MESSRS NORTJE & ASSOCIATES
ELECTRICIAL ENGINEERS

Nortje & Associates

Nortjé & Associates cc
Consulting Electrical Engineers
Raadgewende Elektriese Ingenieurs
Reg. No. /Nr.: CK 89/01134/23

26 May 2016

ERVEN 862, 863, 865 & 866 MAPLETON X 10.

Electrical Engineering – Preliminary Services Report

Introduction

We at Nortje & Associates Consulting Electrical Engineers were appointed to do an investigation and report on the availability of electrical supply capacity and standards for the above mentioned proposed development. The site is situated in the Boksburg SDC (Service Delivery Centre), of the Ekurhuleni Metropolitan Municipality.

The proposed development will provide for ±300 residential units. Based on existing requirements of 3kVA ADMD per unit, the total capacity required is estimated at 900kVA. This will be determined by the final Township Establishment Conditions.

Bulk Supply

After investigation and meetings with the Department of Electricity, Boksburg SDC, it was found that the primary distribution voltage in the area is 11kV. The required capacity is available in the area, but certain minor network upgrading will have to be done to provide sufficient capacity to supply the proposed development.

Based on the Bulk Contribution Policy, the contributions for the proposed development would be ±R1,35million (Based on R1,500/kVA). This should be sufficient to pay for the network upgrade which will be required. Due to the fact that this is an "internal" development, driven by the Housing Department of Ekurhuleni, we are not certain if the bulk contribution policy will apply.

The proposed bulk supply configuration and estimated cost can be provided once the detailed investigation has been completed.

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Internal Reticulation

Internal MV reticulation will most probably be done with 70 or 95 mm², 3-core, Cu, PILC cable rated at 11 KV. All internal MV rings will be supplied from either the proposed 88/11kV substation or a switching station which will have to be build. All transformers and miniature substations to be installed must be 11,000/420 V.

Depending on stand sizes, the individual connections on high density stands will either be a LV connection at 420V, 3-phase or a MV supply at 11kV. Then a private substation or private miniature substation can be build/installed to provide sufficient capacity for the individual consumer needs. Individual full title stands will each be provided with a 242V, single phase supply via a 10 mm² Airdac cable with communication cores for pre-paid meter installation.

Trust the above meets with all requirements.

Should there be any queries or uncertainties, please contact the undersigned.

Regards,

FCC Nortje (Pr Eng)
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