PART 4: AFFECTED PROPERTY

Core clause 11.2(2) states

"Affected Property is property which

- Is affected by the work of the *Contractor* or used by the *Contractor* in Providing the Service
- is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of the Affected Property.

1. Description of the Affected Property and its surroundings

- All sites in which the works shall be executed are situated within TWO Transnet Operations Corridors, viz:
  - Central, and
  - Container
- Infrastructure depots within:
  - Central Corridor are – Krugersdorp, Isando and Vereeniging.
  - Container Corridor are – Heidelberg, Ladysmith, and Durban

1.1. General description

Transnet Freight Rail has three traction systems that are currently in use. These includes the 3kV DC, 25kV AC and 50kV AC traction substations. There is also a distribution network component comprising of 6.6 kV and 11 kV used for signalling equipment supplies as well as yard lights. In total, as of July 2024, the company owns 463 traction substation units and 270 Distribution substation units. These substations are in different geographical locations nationally and strategically placed in corridor groups. The geographical locations of Central and Container corridors are shown in Annexure1. As it can be seen on the maps, these two corridors are geographically vast and the mix of substations is spread across North-West, Gauteng, Mpumalanga, and Kwa-Zulu Natal provinces. Each substation comprises of a High Voltage yard and the indoor, refer to drawing BBB 0414 version 3 as shown in Annexure B, below.

1.2. Existing buildings, structures, and plant & machinery on the Affected Property

The purpose of the "As and When" contract for Traction and Distribution substations is to repair the existing substation equipment that has failed. Appendices B and C below show the typical layout of the outdoor equipment in Transnet substations.

1.3. Subsoil information

As the scope entails ensuring adequate substation protection, from time to time the contractor shall be expected to conduct geotechnical tests; also, in cases where soil rehabilitation is required due to oil spillages, the contractor shall take soil samples as frequently as required until compliance with environmental regulations is achieved.

1.4. 1.4 Hidden services

The requirement may differ per site, the contractor must comply with E7/1 specifications which states that:

- No pegs or stakes shall be driven, or any excavation made before the Contractor has established that there are no underground services which may be damaged thereby.
- Any damage shall be reported immediately to the Contract Supervisor, or to the official in charge at the nearest station, or to the traffic controller in the case of centralised traffic control.'

1.5. Other reports and publicly available information

Any other information applicable/required per site will be made available to the Contractor.

ANNEXURE A: Central and Container Corridors

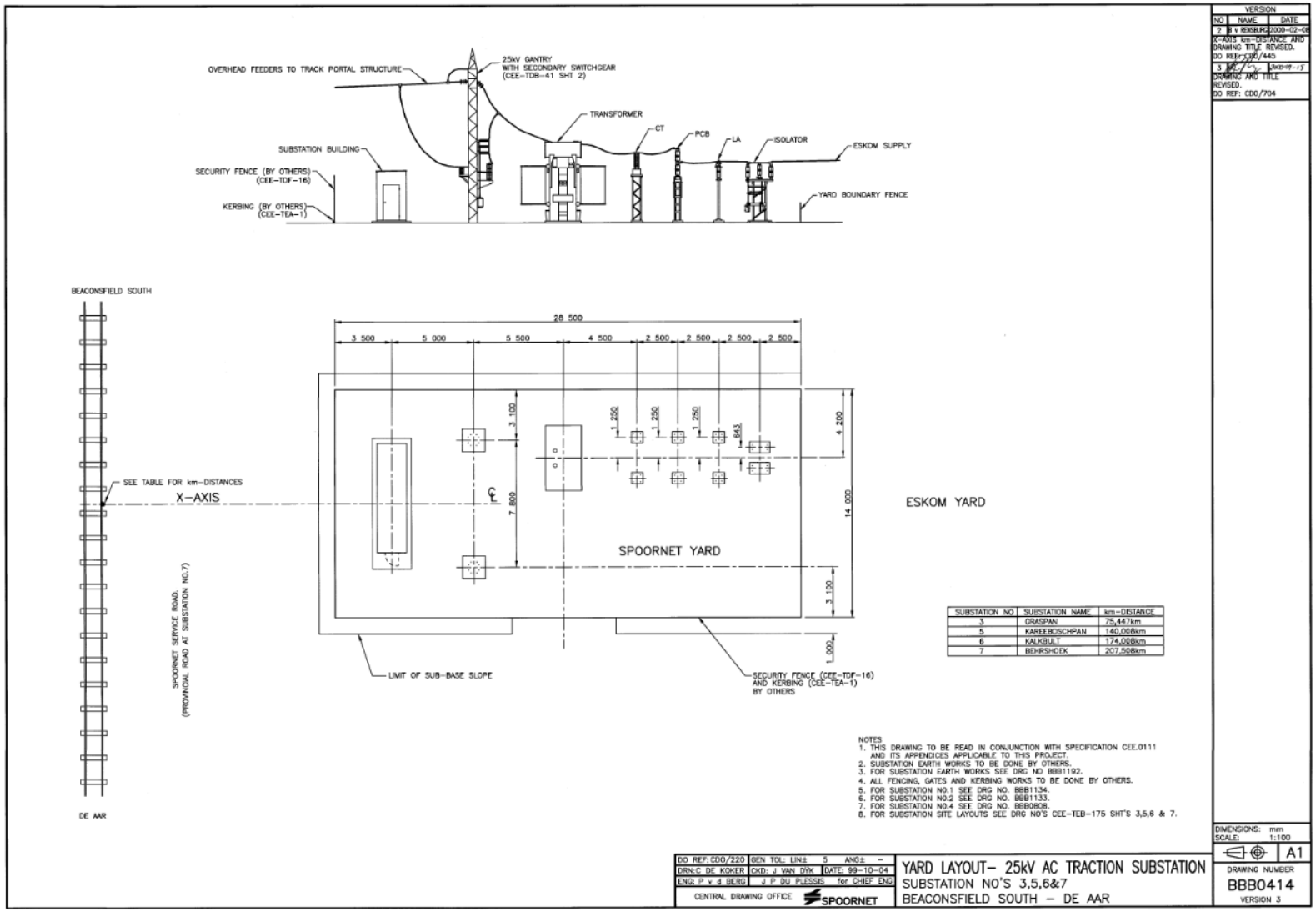
CENTRAL



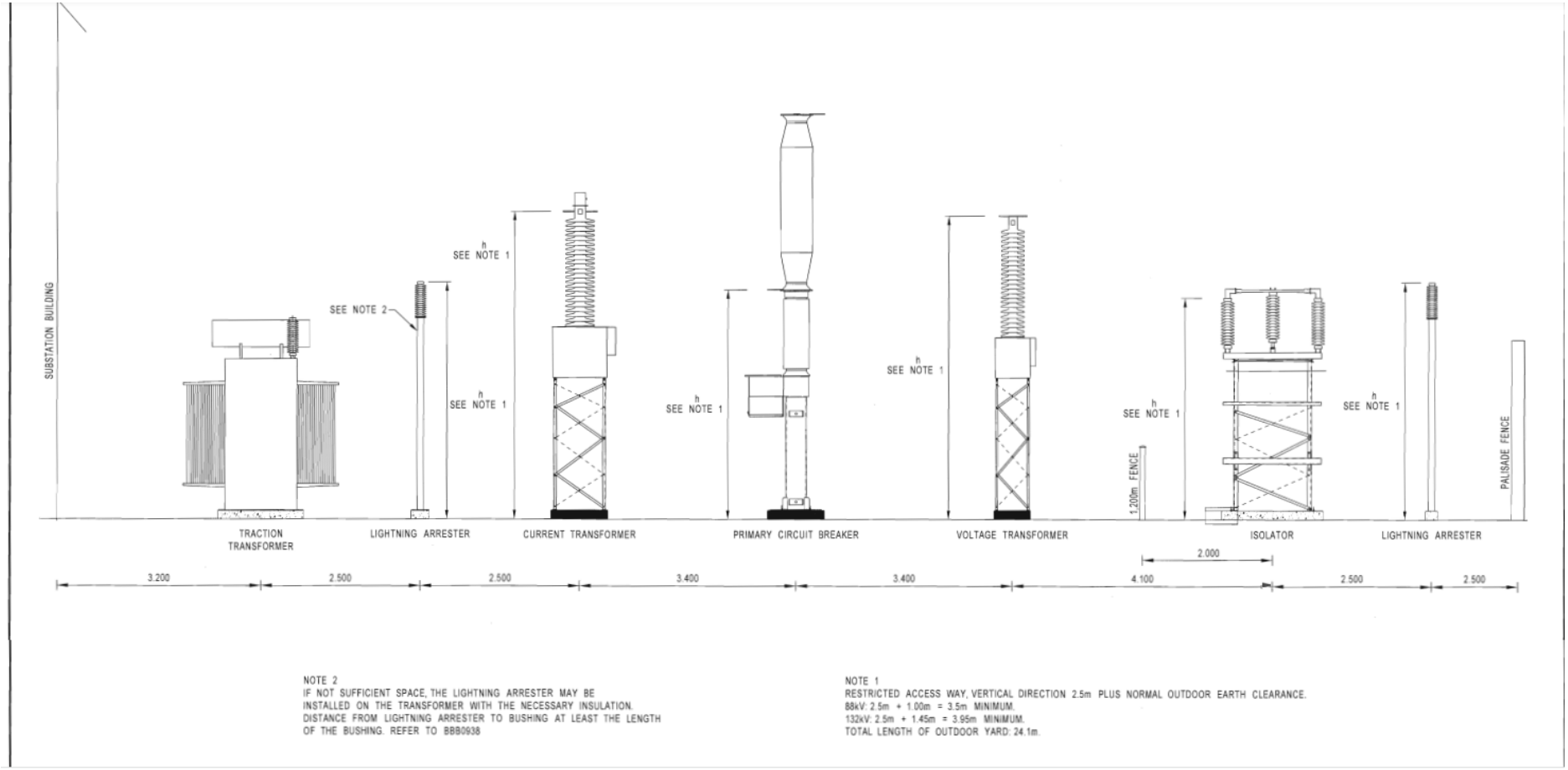
CONTAINER



ANNEXURE B: Typical 25kV AC Substation



ANNEXURE C: Typical Substation Layout of HT Yard (3kV DC, 11kV AC and 25kV AC)


SUBSTATION BUILDING
SEE NOTE 2
h
SEE NOTE 1
h
SEE NOTE 1
h
SEE NOTE 1
h
SEE NOTE 1
h
SEE NOTE 1
h
SEE NOTE 1
1.200m FENCE
PALISADE FENCE
TRACTION TRANSFORMER
LIGHTNING ARRESTER
CURRENT TRANSFORMER
PRIMARY CIRCUIT BREAKER
VOLTAGE TRANSFORMER
ISOLATOR
LIGHTNING ARRESTER
2.000
3.200
2.500
2.500
3.400
3.400
4.100
2.500
2.500
NOTE 2
IF NOT SUFFICIENT SPACE, THE LIGHTNING ARRESTER MAY BE INSTALLED ON THE TRANSFORMER WITH THE NECESSARY INSULATION. DISTANCE FROM LIGHTNING ARRESTER TO BUSHING AT LEAST THE LENGTH OF THE BUSHING. REFER TO BBB0938
NOTE 1
RESTRICTED ACCESS WAY, VERTICAL DIRECTION 2.5m PLUS NORMAL OUTDOOR EARTH CLEARANCE.
88kV: 2.5m + 1.00m = 3.5m MINIMUM.
132kV: 2.5m + 1.45m = 3.95m MINIMUM.
TOTAL LENGTH OF OUTDOOR YARD: 24.1m.