

**ELECTRICAL LEGEND**

-  1 x 26W CFL Wall mounted light, BEKA Series 32
-  1 x 26W CFL Bulkhead, BEKA Series 31
-  Electrical Distribution Board
-  Reticulation/cable route
-  Man hole
-  Standard open channel Fluorescent Light fitting CW 2x35w Lumilux cool white T5, higher efficiency.
-  Earth termination system

**NOTES: LIGHTNING PROTECTION GENERAL NOTES**

As shown based on architectural layout configuration, which block requires number of copper rods, number of down conductors, number of earth pits. However the active lightning system is the only possible method to protect from direct lightning strikes. The requirement to use the active lightning protection whenever the conventional solution is inconvenient or when the former is more preferable to the latter as in the case of the efficient protection of the structure.

Contractor/Installer shall have to fully comply with the **SANS-10111-4-10** at all applications, relative to lightning and protection of a building.

The Contract shall include for the supply and installation of all necessary components to provide a complete lightning protection system to each building block structure as detailed in the following Specification Sections in order that the building(s) may be protected against the effects of a lightning discharge in accordance with British Standard BS 6651.

The installation shall comprise air networks connected to roof and down conductors and finally terminated in earth electrodes, at a **specified level points**, in accordance with the details drawings or in the following Specification Section.

Lightning protection system should include all of the following elements, which work together to prevent lightning damage:

1. Air Terminals (Lightning Rods)
2. Braided Conductor (Cables)
3. Bonds to metallic bodies
4. Ground Rods or Ground Plates
5. Surge Arrestors

**Lightning Protection Earth Reference Pits**  
 Certain individual down conductors shall be effectively bonded to suitable 3.00m long by 16mm diameter earth rods manufactured from hard drawn copper rod in the form of 1.20m sections. Each section shall be complete with internal screws and socket. The earth reference electrode shall be installed not more than 1.00m away from the building with the earth reference electrode head located not less than 500mm below the ground level. Final connection of the down conductor to the earth reference electrode shall be made by means of a pressure type connector clamp.

The Contract shall include for the supply and delivery of inspection pits manufactured as detailed in the attached Specification Section and drawings, these to be handed over to the contractor for installation. An inspection pit shall be supplied for each earth termination. Herein this covers suitable to withstand vehicular traffic shall be provided for pits located in the roadway areas. The lid of each pit shall be lockable and jam free construction and supplied with the appropriate key.

Where electrode points are located internally within building floor slabs they shall comprise a suitable earth rod water seal installed in the base of a pocket formed in the slab, with the pocket and associated cover.

The body of each earth pit shall be a minimum composite weather-proof, lightweight, polymer material with a high resistance to chemical damage from such substances as petrol, oil, diesel, thinner etc. Each unit shall include high ultraviolet stability, wide temperature application and earth bar facility (where necessary) to permit multiple earth tape connections to be made. Where there are not suitable concrete pits shall be provided.

REV.:	DATE:	FOR CONSTRUCTION	COMMENT:
0	19-06-2017		

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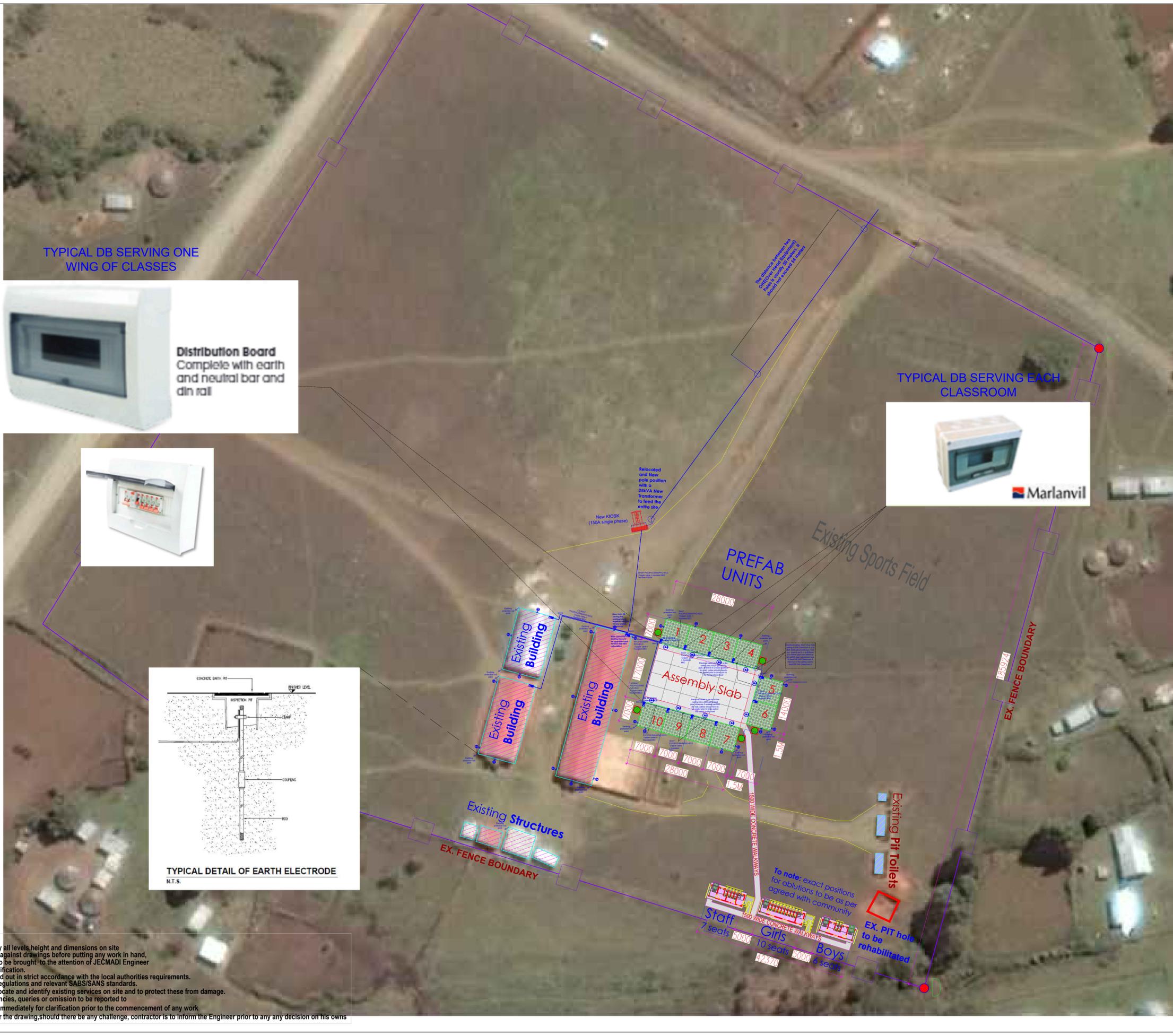
**PROJECT NAME:** VUKAYIBAMBE SSS  
 Provision of Emergency Temporal Classrooms & Ablutions District: Mbizana

**DRAWING TITLE:**  
 SITE LAYOUT/ ELECTRICAL RETICULATION

**TYPICAL ZONING:**

Drawn by: T.N  
 Checked by: T.N  
 Signature: 201370365  
 Project No.: JCM-16/2017  
 Drawing No.: EL-01

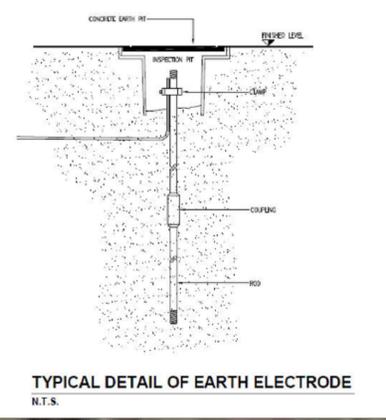
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**TYPICAL DB SERVING ONE WING OF CLASSES**



**TYPICAL DB SERVING EACH CLASSROOM**



**IMPORTANT NOTE:**  
 Contractors to verify all levels, height and dimensions on site and to check same against drawings before putting any work in hand, any discrepancies to be brought to the attention of JECMADI Engineer immediately for clarification.  
 all work to be carried out in strict accordance with the local authorities requirements. National Building Regulations and relevant SABS/SANS standards.  
 Contractors are to locate and identify existing services on site and to protect these from damage. any errors discrepancies, queries or omission to be reported to JECMADI Engineer immediately for clarification prior to the commencement of any work  
 Cable route is as per the drawing, should there be any challenge, contractor is to inform the Engineer prior to any any decision on his owns