

1.4 Switchboards

Switchboards supplied as part of the electrical installation shall comply with the requirements specified on the Project Documentation and AS/NZS 3000. as applicable.

Switchboards shall be complete with all necessary components, in compliance with AS 3439.

All switchboards shall have a minimum of 25% spare spaces for additional circuit protection and control devices. Spare spaces shall include busbars, mountings and individually blanked openings. Spare poles on MCCB chassis shall have insert type pole fillers.

2.0 Cables General Installation

The Project electrical drawings detail the general route for the cables. Any changes to the routes shall be approved by the City of Perth Project Officer / Manager prior to any works commencing.

Underground low voltage cables shall be installed in conduit. Cables not installed underground must be reticulated along pathways with suitable mechanical protection. In general this shall be achieved using cable trunking, cable ladder or conduit (HD PVC or galvanised steel conduit as approved by City of Perth Project Officer / Manager). Where cables are required to terminate at field equipment, they shall be mechanical protection for the final length of cable.

All cables shall be installed in accordance with the cable As/NZS 3000.. Consideration shall be given to the minimum cable bending radii and maximum cable pulling tensions.

All non UV resistant cables shall be installed in either cable ladder with a top cover, continuous steel conduit or similar to prevent UV damage.

All final connections to equipment such shall be completed using flexible cables where required.

The correct phasing and connection of all cables shall be checked and verified.

All cable lengths shown in the cable schedule or listed on the drawings are estimated route lengths only and in all cases are approximate. Exact final lengths shall be verified by the Contractor prior to cutting cables.

All underground cables, whether in conduit or direct buried, shall have an approved cable warning tape buried approximately 300mm below finished ground level directly above the cable run.

2.1 Segregation of Cables

Suitable segregation shall be maintained between electrical services grouped together as follows:

- High voltage cables;
- Low voltage and lighting; and
- Communication cables (including Control and instrumentation cables)

Segregation between low voltage and high voltage cables shall be 300mm clear.

Segregation between Control, instrumentation & communication cables and low voltage cable shall be 150mm clear.

Generally each group shall be allocated to a separate enclosure, unless otherwise indicated on the Project electrical drawings.