

INTRODUCTION AND GENERAL REQUIREMENTS

Scope

600142 3.1.00 The following Electrical services should be considered in the Design Brief:

Electrical supply including:

- general services;
- critical care services;
- essential services;
- UPS and Standby Power;
- electrical equipment;
- emergency lighting and signage;
- heating and cooling;
- lighting, including site and security lighting;
- patient protection systems;
- supply and distribution;
- switchgear and circuit protection;
- transformer equipment;
- strategy for expansion.

General

600143 3.2.00 Electrical services should be designed to provide:

- safety and reliability;
- capacity for all equipment and plant;
- capacity for expansion;
- flexibility for isolation, shutdown and maintenance;
- compatibility with existing on-site and facility systems;
- compatibility with provider network;
- cost efficiency;
- minimise electromagnetic interference;
- distribution systems that will not see all modules of any critical service affected by any one interruption event e.g. modules of intensive care services should not be off a common sub main or one switchboard.

600144 3.2.10 Lightning protection although a requirement, is not usually a design issue for consideration in the preliminary design stages.

Design

600145 3.3.00 Consideration should be given to the location and requirements for:

- cabling;
- emergency battery supply;
- standby generating plant and fuel supply;
- substations and transformers;
- switchboards;
- switch rooms.

600146 3.3.10 Electrical supply is governed by supply authority regulations, standards and client policy. Sub stations are generally owned by the supply authority. Easements, substation location, security, access and egress for personnel and equipment should be considered.

Part E - Building Services and Environmental Design

- 600147 3.3.20 Attention should be paid to the placement of sub stations and electrical mains as the former may provide a fire hazard, and both can adversely affect electrical and communications equipment. Later relocation or rectification can be costly.