

INTRODUCTION AND GENERAL REQUIREMENTS

Scope

- 600148 4.1.00 The following Fire services should be considered in the Design Brief:
- fire detection and suppression systems;
 - hydrants and hose reels;
 - portable extinguishers;
 - smoke control and air pressurisation (refer to Mechanical Section);
 - signs and evacuation plans;
 - warning and information systems;
 - water supply;
 - water storage.

General

- 600149 4.2.00 Fire protection is usually designated as an Active or Passive system. Both require consideration in the preliminary design stages.

Active systems involve engineering services solutions. Passive systems include compartments, egress routes, and fire and smoke rated construction. The employment of active systems can influence both the building design, and the extent and cost of passive provisions.

Design

- 600150 4.3.00 The following active systems may require equipment enclosures and adequate access for fire fighting personnel and equipment:

- external hydrants / hose reel layout;
- fire control rooms;
- pumps, tanks, sprinkler boosters;
- water supply and distribution issues;
- fire detection system.

- 600151 4.3.10 The passive systems may include:

- compartmentation;
- construction;
- fire egress arrangements;
- fire separation.

- 600152 4.3.20 The requirement for sprinklers for example will add a vertical component to the ceiling space requirement, which in turn will affect the overall building height.

- 600153 4.3.30 Passive solutions can play a major role in early planning and particular consideration should be given to compartment size and design. By building in flexibility and area safety margins, changes in briefing can be anticipated and incorporated in later planning. The repositioning or addition of an egress stair as a result of modifications to compartment and egress layout can be difficult and costly.