Table 8.1: General Requirements of Fire Detection and Alarm Systems

ITEMS	REQUIREMENTS
8. PARTITIONS	i. Where partitions within the spaces extend to within 15% of the ceiling height, the spaces separated by the partitions shall be considered as separate rooms. ii. And such separate rooms shall be provided with individual detector coverage.
9. HVAC	i. In spaces served by air-handling systems, detectors shall not be located lesser than 1m from supply or return diffusers, where airflow prevents operation of the detectors. ii. Where concealed accessible spaces above suspended ceilings are used as a return air plenum, detection shall be provided at each connection from the return air plenum to the central air-handling system. iii. Detectors installed in such plenums shall be listed for such application. iv. In under-floor spaces and above-ceiling spaces that are used as HVAC plenums, detectors shall be listed for the anticipated environment as required by ambient conditions like temperature, humidity and airflow. v. Detector used in plenums shall have spacing and locations selected on the basis of anticipated airflow patterns and fire type. vi. Detectors placed in environmental air ducts or plenums shall not be used as a substitute for open area detectors.
10. EXPLOSIVE ATMOSPHERE	i. Where Fire Detection and Alarm System is installed in explosive, Hazardous atmosphere with flammable vapours in its atmosphere, all devices, enclosures, wiring, junction boxes, connectors and circuitry shall be listed and approved "Explosion Proof" and "Intrinsically Safe" equipment.
11. DETECTION ZONES (TYPICALLY FOR EXISTING CONVENTIONAL SYSTEMS)	i. Buildings shall be divided into a number of detection zones for easy recognition and short search time. Fire alarm systems shall be designed to suite the fire plan procedures followed by occupants during emergency. Single open, short circuit or ground in one detection zone shall not affect the operation of other zones. ii. The area of any single open detection zone to which the building has been divided shall not exceed 2000 m^2; except for a single, open plan area, which should not exceed 10 000 m^2. iii. If any floor area is greater than 2000m^2, it shall be divided into separate detection zones of 2000m^2 or less, this subdivision may or may not be achieved by a physical barrier. iv. Search distance shall not exceed 60 m for conventional system; Search distance for addressable system is 100 m if building is protected by sprinklers. v. A zone shall not include multiple floors. vi. Automatic fire detectors within any enclosed stairwell or lift shaft or other enclosed flu-like structure should be considered as a separate detection zone. vii. Indication of detection zone status on the control panel is by LED and/or graphical text indicator. viii. Voids below raised floor and voids above false ceiling shall be configured as separate zones from the room space. ix. Any remote indicator should be clearly labelled to indicate detectors located in voids. They should be sited and/or labelled in such a way as to assist in determining the location of the detectors that they serve.