Table 10.8.: Mall Smoke Management System

ITEMS	REQUIREMENTS
8. SYSTEM ACTIVATION	i. Mall Smoke Control Systems shall be independently activated by each of the following: a. Required automatic sprinkler system and smoke detectors (which ever activates first) b. Manual controls that are readily accessible to the fire department. ii. For large spaces where smoke stratification can occur, one of the following detection means shall be used: a. Beam-type smoke detector(s) aimed at an upward angle to intersect the smoke layer regardless of the level of stratification. b. Horizontally mounted beam-type smoke detector(s) located at the ceiling with additional beam-type smoke detector(s) located at other appropriate levels in the volume to cover any identified unconditioned (dead air) spaces. c. Horizontally mounted beam-type smoke detector(s) located below the lowest expected level of stratification. d. Aspiration (air sampling) smoke detection system. iii. A means of manually starting and stopping the smoke management system shall be provided with Smoke Control Panel (SCP) at the emergency command center.
9. USAGE OF HVAC SYSTEM	i. The mall HVAC system shall be permitted for corridor or open circulation areas smoke extraction provided that the system adheres to the provisions of **Section 2.8.** and such system does not interfere with the natural smoke movement of the area. ii. HVAC system used for any smoke control and make-up air supply shall be designed and installed with dampers in ducting network such that the activation of system shall not circulate the smoke back into the air supply network and into the building. iii. The presence of filters or sound attenuators shall be allowed on the supply ductwork. iv. The mall HVAC system shall also be permitted to achieve and enhance the mall smoke control system by establishing positive pressure differences at the adjacent zones, communicating spaces and compartments. v. Any HVAC system put to service for establishing pressure differences or as smoke purge system shall be designed through an engineering analysis.
10. STAND-BY FAN	i. Back-up (Stand-by) fans shall not be required for mall smoke management systems.
11. STAND-BY POWER	i. Mall smoke management system, the control panel, automatic Smoke curtains, Fan shall be provided with an emergency power. ii. The fan of the smoke control system shall be supplied by both normal and standby power. iii. The fan power wiring and ducts shall be located and properly protected to ensure a minimum of 20 minutes of operation in the event of activation.